PROJ. 52494
CAT. T3.1
WORKING COPY

	was a second	
W05073	WORKING COPY	
REPORT COVER PAGE		1
CASE NARRATIVE		3
SAMPLE RESULTS SUMMARY		7
DATA REVIEW CHECKLISTS/NCMS		53
CHAIN OF CUSTODY		79
SAMPLE PREP ANALYSIS SHEETS		111
ICOC	***************************************	133
TOTAL # PAGES IN DOCUMENT		143

RECEIVED

JAN 2 3 2007 DL STEWART 144 pages

## **Analytical Data Package Prepared For**

# **Pacific Northwest National Lab**

Radiochemical Analysis By

## STL Richland STLRL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains \_\_\_\_\_ Pages

Report Nbr: 34259

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH	
W05073	107-009	B1L1T6	J6L020186-1	JKPK01AA	9JKPK010	6345293	
		B1L204	J6L020186-2	JKPK31AA	9JKPK310	6345293	
	107-002	B1KLX1	J6L020189-1	JKPLL1AA	9JKPLL10	6345297	
		B1KLX1	J6L020189-1	JKPLL1AC	9JKPLL10	6345306	
		B1KLX1	J6L020189-1	JKPLL1AD	9JKPLL10	6345308	
		B1KLX1	J6L020189-1	JKPLL1AE	9JKPLL10	6345301	
		B1KLX1	J6L020189-1	JKPLL1AF	9JKPLL10	6345294	
	S07-010	B1KPW0	J6L020191-1	JKPLR1AA	9JKPLR10	6345303	
		B1KPW0	J6L020191-1	JKPLR1AC	9JKPLR10	6345304	AT. T3
		B1KR25	J6L020191-2	JKPLT1AA	9JKPLT10	6345297	
		B1KR25	J6L020191-2	JKPLT1AC	9JKPLT10	6345299	* 52 8 7
		B1KR25	J6L020191-2	JKPLT1AD	9JKPLT10	6345293	
		B1KR25	J6L020191-2	JKPLT1AE	9JKPLT10	6345303	
		B1KR25	J6L020191-2	JKPLT1AF	9JKPLT10	6345304	8
	S07-011	B1L3R4	J6L020192-1	JKPL61AA	9JKPL610	6345306	Ž

Comments:

Report Nbr: 34259

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05073	S07-011	B1L3R4	J6L020192-1	JKPL61AC	9JKPL610	6345308
	W07-011	B1L6F8	J6L060355-1	JKXVD1AA	9JKXVD10	6345295
		B1L6F3	J6L060355-2	JKXVG1AA	9JKXVG10	6345295
		B1L6C8	J6L060355-3	JKXVK1AA	9JKXVK10	6345295
		B1L6C3	J6L060355-4	JKXVM1AA	9JKXVM10	6345295
		B1L6D3	J6L060355-5	JKXVQ1AA	9JKXVQ10	6345295
	S07-010	B1KR39	J6L060370-1	JKXXH1AA	9JKXXH10	6345297
		B1KR39	J6L060370-1	JKXXH1AC	9JKXXH10	6345293
	W07-011	B1L674	J6L060373-1	JKX0A1AA	9JKX0A10	6345303
		B1L5V7	J6L060373-2	JKX0E1AA	9JKX0E10	6345297
		B1L5V7	J6L060373-2	JKX0E1AC	9JKX0E10	6345306
		B1L5V7	J6L060373-2	JKX0E1AD	9JKX0E10	6345308
		B1L5V7	J6L060373-2	JKX0E1AE	9JKX0E10	6345303
	S07-011	B1L3J8	J6L060376-1	JKX061AA	9JKX0610	6345297
		B1L429	J6L060376-2	JKX071AA	9JKX0710	6345297
	107-007	B1L1P0	J6L080130-1	JK3QJ1AA	9JK3QJ10	6345301
	S07-010	B1KPP6	J6L080158-1	JK30K1AA	9JK30K10	6345297
	W07-011	B1L6H2	J6L080160-1	JK3171AA	9JK31710	7022272
	107-010	B1L274	J6L080235-1	JK4W71AA	9JK4W710	6345293
		B1L274	J6L080235-1	JK4W71AC	9JK4W710	6345294

## **Certificate of Analysis**

Pacific Northwest National Laboratories Sigma V Building Richland, WA 99352

January 22, 2007

Attention: Dot Stewart

SAF Number : I07-009, I07-002, S07-010, S07-011, W07-011,

107-007, 107-010

Date SDG Closed : December 6, 2006 Number of Samples : Twenty (20)

Sample Type : Water SDG Number : W05073

Data Deliverable : 45-Day / Summary

## **CASE NARRATIVE**

#### I. Introduction

Between December 1, 2006 and December 6, 2006, twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

PGW ID#	STLR ID#	DATE OF RECEIPT	<b>MATRIX</b>
B1L204	JKPK3	12/01/06	WATER
BILIT6	JKPK0	12/01/06	WATER
BIKLXI	JKPLL	12/01/06	WATER
B1KR25	JKPLT	12/01/06	WATER
B1KPW0	JKPLR	12/01/06	WATER
B1L3R4	JKPL6	12/01/06	WATER
B1L6D3	JKXVQ	12/05/06	WATER
B1L6C3	JKXVM	12/05/06	WATER
B1L6C8	JKXVK	12/05/06	WATER
B1L6F3	JKXVG	12/05/06	WATER
B1L6F8	JKXVD	12/05/06	WATER
B1KR39	JKXXH	12/04/06	WATER
B1L674	JKX0A	12/04/06	WATER

# Pacific Northwest National Laboratories January 22, 2007

B1L5V7	JKX0E	12/04/06	WATER	
B1L3J8	JKX06	12/05/06	WATER	
B1L429	JKX07	12/05/06	WATER	
B1L1P0	JK3QJ	12/05/06	WATER	
B1KPP6	JK30K	12/06/06	WATER	
B1L6H2	JK317	12/06/06	WATER	
B1L274	JK4W7	12/06/06	WATER	

#### II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

#### III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

#### **Gas Proportional Counting**

Gross Alpha by method RICH-RC-5014 Gross Beta by method RICH-RC-5014 Strontium-90 by method RICH-RC-5006

#### Gamma Spectroscopy

Gamma Spec by method RICH-RC-5017 Gamma Spec (LL) by method RICH-RC-5017 Iodine-129 (LL) by method RICH-RC-5025

#### **Liquid Scintillation Counting**

Technetium-99 by TEVA method RICH-RC-5065 Tritium by method RICH-RC-5007

#### **Laser Induced Phosphorimetry**

Total Uranium by method RICH-RC-5058

#### **Chemical Analysis**

Total Coliform by method 9223

#### IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

# Pacific Northwest National Laboratories January 22, 2007

#### V. Comments

#### **Gas Proportional Counting**

#### Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1L5V7) results are within contractual requirements.

#### Gross Beta by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1L3R4) results are within contractual requirements.

#### Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1KLX1) results are within contractual requirements.

#### Gamma Spectroscopy

#### Gamma Spec by method RICH-RC-5017:

The LCS, batch blank, samples and sample duplicate (B1KR25) results are within contractual requirements.

#### Gamma Spec (LL) by method RICH-RC-5017:

There was insufficient sample for a duplicate analysis. A sample was recounted on a different detector to have a replicate. Except as noted, the LCS, batch blank, samples and sample duplicate (B1L1P0) results are within contractual requirements.

#### Iodine-129 (LL) by method RICH-RC-5025:

The LCS, batch blank, samples and sample duplicate (B1L274) results are within contractual requirements.

#### **Liquid Scintillation Counting**

#### Technetium-99 by TEVA method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1L674), and sample matrix spike (B1L5V7) results are within contractual requirements.

#### Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1L3J8) results are within contractual requirements.

#### **Total Uranium**

### Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1KPW0), and sample matrix spike (B1KR25) results are within contractual requirements.

#### **Chemical Analysis**

Pacific Northwest National Laboratories January 22, 2007

#### Total Coliform by method 9223

The samples were analyzed in two batches: 6345295 and 7022272. The LCS, batch blank, samples and sample duplicate (B1L6D3 and B1L6H2 respectively) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Sherryl A. Adam

Project Manager

1/22/2007 3:10:23 PM

## STL Richland Report

Lab Code: STLRL

FormNbr	: R	FormatType: F	FEAD Versi	ion: 05	Rpt N	br: 34259		File Name:	h:\Reportdb\	edd\FeadIV\Rad\W050	73.Edd, h:\Rep	ortdb/ed	dd\FeadIV\Rad\34259.E	Edd
Lab Sample Id: 9JK30K10	Client Id: B1KPP6	Test User	Contract Nbr MW6-SBB-A1	SAF No.	Nbr:	ос Тур		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2006 09:48	
Batch 6345297	Analyte H-3	<b>CAS#</b> 10028-17-8	Result 2.57E+03		CntU 2S	TotU 2S	Qual	M <b>DA</b> 2.95E+02	TrcYield 2 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Time 01/06/2007 13:38	Act
Lab Sample Id: 9JK3QJ10	Client Id: B1L1P0	Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b> E	or Sdg Nbr: W05073	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:	. ,,		llection Date: 2006 09:48	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6345301	BE-7	13966-02-4	1.57E+01	pCi/L	2.2E+01	2.2E+01	U	4.32E+0	1	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	CO-60	10198-40-0	1.54E+00	pCi/L	2.2E+00	2.2E+00	U	4.73E+0	0	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	CS-134	13967-70-9	4.12E-01	pCi/L	1.9E+00	1.9E+00	U	3.65E+0	0	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	CS-137	10045-97-3	4.64E-02	pCi/L	1.8E+00	1.8E+00	Ų	3.32E+0	0	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	EU-152	14683-23-9	-5.86E-01	pCi/L	4.9E+00	4.9E+00	U	8.56E+0	0	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	EU-154	15585-10-1	-4.27E+00	pCi/L	6.6E+00	6.6E+00	U	1.10E+0	1	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7 1
6345301	EU-155	14391-16-3	2.13E-01	pCi/L	2.7E+00	2.7E+00	U	4.84E+0	0	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	K-40	13966-00-2	1.04E+00	pCi/L	4.1E+01	4.1E+01	U	9.01E+0	1	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7 1
6345301	RU-106	13967-48-1	-7.44E+00	pCi/L	1.5E+01	1.5E+01	Ų	2.69E+0	1	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7
6345301	SB-125	14234-35-6	2.41E+00	pCi/L	4.6E+00	4.6E+00	U	8.74E+0	0	GAMMA_GS	2.5021E+00	L	01/15/2007 18:27	7 1
Lab Sample Id: 9JK4W710		Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b> I	br Sdg Nbr: W05073	7.		Moisture/ Solids%*:	Distilled Volume				ilection Date: 2006 11:42	***************************************
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6345293	l-129L	15046-84-1	1.55E-02	pCi/L	1.2E-01	1.2E-01	U	2.20E-01	1 108.9	I129LL_SEP_LEPS	3.9245E+00	L	01/17/2007 19:13	3 I
6345294	SR-90	10098-97-2	3.87E-01	pCi/L	2.3E-01	2.5E-01	U	4.80E-01	1 79.5	SRISO_SEP_PRE	1.0058E+00	L	01/17/2007 06:53	3 1
Lab Sample Id:		Test User	Contract Nbr	SAF N	Nbr:	,.		Moisture/ Solids%*:	Distilled Volume				llection Date:	
9JKPK010	B1L1T6		MW6-SBB-A1		W0507								2006 10:55	
Batch 6345293	Analyte I-129L	<b>CAS#</b> 15046-84-1	<b>Result</b> 1.15E+00	<b>Unit</b> pCi/L	CntU 2S 3.4E-01	TotU 2S 3.4E-01	<b>Q</b> ua U	I MDA 5.36E-0	<b>TrcYield</b> 1 100.0	Method I129LL_SEP_LEPS	Alq Size 3.9343E+00	Unit L	Analy Date/Time 01/17/2007 17:26	Act
Lab Sample Id: 9JKPK310	Client Id: B1L204	Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b>	br Sdg Nbr: W0507	**		Moisture/ Solids%*:	Distilled Volume	•			Date: 12006 11:37	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	il MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6345293	I-129L	15046-84-1	-5.68E-02	pCi/L	1.3E-01	1.3E-01	U	2 21 5 0	1 101.1	1129LL SEP LEPS	3 00565.00	1	01/17/2007 17:27	7 1

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/22/2007 3:10:23 PM

## STL Richland Report

Lab Code: STLRL

FormNb		FormatType:	FEAD Versi	ion: 05	Rpt N	<b>br:</b> 34259		File Name:	:\Reportdb\	edd\FeadIV\Rad\W050	73.Edd, h:\Rep	ortdb\ed	d\FeadIV\Rad\342	59.Edd	;
Lab Sample Id: 9JKPL610	Client	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr: W05073	QC Type		Moisture/ Solids%*:	Distilled Volume			E	lection Date:		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Tim	e A	Act
6345306	ALPHA	12587-46-1	1.47E+00	pCi/L	1.0E+00	1.1E+00		1.33E+00	100.0	9310_ALPHABETA	1.993E-01	L	01/12/2007 16		1
6345308	BETA	12587-47-2	6.00E+00	pCí/L	1.6E+00	1.8E+00		2.66E+00	100.0	9310_ALPHABETA	2.011E-01	L	01/12/2007 15	i:18	1
Lab Sample Id: 9JKPLL10	Client Id: B1KLX1	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr: W05073	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		t	lection Date:		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	MDA .	TrcYield	Method	Alq Size	Unit	Analy Date/Tim	e A	Act
6345297	H-3	10028-17-8	1.15E+04	pCi/L	3.6E+02	5.9E+02		2.96E+02	100.0	906.0_H3_LSC	5.00E-03	L	01/06/2007 04		ı
6345306	ALPHA	12587-46-1	3.77E+00	pCi/L	1.8E+00	2.0E+00		1.79E+00	100.0	9310_ALPHABETA	2.021E-01	L	01/12/2007 16	i:02	1
6345308	BETA	12587-47 <b>-</b> 2	1.15E+01	pCi/L	2.0E+00	2.5E+00		2.76E+00	100.0	9310_ALPHABETA	1.983E-01	L	01/12/2007 15		ı
6345301	BE-7	13966-02-4	1.23E+01	pCi/L	2.2E+01	2.2E+01	U	4.28E+01		GAMMA_GS	2.5009E+00	L	01/15/2007 20	):12	ı
6345301	CO-60	10198-40-0	-1.51E+00	pCi/L	1.8E+00	1.8E+00	U	2.81E+00		GAMMA_GS	2.5009E+00	L	01/15/2007 20	):12	ı
6345301	CS-134	13967-70-9	5.30E-01	pCi/L	1.4E+00	1.4E+00	U	2.96E+00		GAMMA_GS	2.5009E+00	L	01/15/2007 20		1
6345301	CS-137	10045-97-3	7.57E-01	pCi/L	1.8E+00	1.8E+00	U	3.59E+00		GAMMA_GS	2.5009E+00	L	01/15/2007 20		1
6345301	EU-152	14683-23-9	-2.19E+00	pCi/L	4.7E+00	4.7E+00	Ų	7.94E+00		GAMMA_GS	2.5009E+00	L	01/15/2007 20		ŀ
6345301	EU-154	15585-10-1	2.31E+00	pCi/L	5.1E+00	5.1E+00	U	1.09E+01		GAMMA_GS	2.5009E+00	L	01/15/2007 20		ı
6345301	EU-155	14391-16-3	-9.45E-03	pCi/L	4.0E+00	4.0E+00	U	7.11E+00		GAMMA_GS	2.5009E+00	L	01/15/2007 20	):12	1
6345301	K-40	13966-00-2	5.34E+00	pCi/L	4.2E+01	4.2E+01	U	3.29E+01		GAMMA_GS	2.5009E+00	L	01/15/2007 20		ı
6345301	RU-106	13967-48-1	-7.15E+00	pCi/L	1.8E+01	1.8E+01	U	3.11E+01		GAMMA_GS	2.5009E+00	L	01/15/2007 20		ı
6345301	SB-125	14234-35-6	1.69E+00	pCi/L	4.5E+00	4.5E+00	U	8.72E+00		GAMMA_GS	2.5009E+00	L	01/15/2007 20		ı
6345294	SR-90	10098-97-2	4.22E-01	pCi/L	2.4E-01	2.5E-01	U	4.57E-01	74.9	SRISO_SEP_PRE	1.008E+00	L	01/17/2007 06	:53	1
Lab Sample Id: 9JKPLR10	Client Id: B1KPW0	Test User	Contract Nbr MW6-SBB-A1	<b>SAF Nb</b> S07-010	r <b>Sdg</b> <b>Nbr:</b> W05073	QC Type	):	Moisture/ Solids%*:	Distilled Volume	Sample On Date:			ection Date: 006 11:27		
Batch	Analyte	CAS#	Result			TotU 2S	Qual	MDA T	rcYield	Method	Alq Size	Unit	Analy Date/Time	<u>,</u> л	lct
6345303	TC-99	14133-76-7	4.87E+00	pCi/L	-	5.7E+00	U	8.86E+00		TC99_ETVDSK_LS	•	L	01/10/2007 22		1
6345304	Uranium	7440-61-1	5.42E+00	ug/L	6.4E-01	6.4E-01		8.15E-02		UTOT_KPA	2.57E-02	_	01/17/2007 17	-	1
Lab Sample Id: 9JKPLT10	Client Id: B1KR25	Test User	Contract Nbr MW6-SBB-A1	<b>SAF Nb</b> S07-010	r Sdg Nbr: W05073	QC Type	: ::	Moisture/ Solids%*:	Distilled Volume	Sample On Date:		0	ection Pate: 006 07:59		

STL Richland

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/22/200	07°3:10:23 P	$^{PM}$			Si	TL Rich	ılan	id Repor	rt			I	ab Code: STLRL	
FormNb	r: A	FormatType: F	EAD Vers	i <b>on</b> : 05	Rpt N	br: 34259		File Name:	n:\Reportdb\	edd\FeadIV\Rad\W050	73.Edd, h:\Rep	ortdb\ed	d\FeadIV\Rad\34259.E	∃dd
Batch	Analyte	CAS#	Result	Unit		TotU 2S	Qual		TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6345297	H-3	10028-17-8	1.21E+04	pCi/L	3.7E+02	6.1E+02		2.95E+02		906.0_H3_LSC	5.00E-03	L	01/06/2007 05:28	3 1
6345299	BE-7	13966-02-4	6.82E-01	pCi/L	2.2E+01	2.2E+01	U	4.19E+01		GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<i>i</i>
6345299	CO-60	10198-40-0	6.91E+00	pCi/L	3.8E+00	3.8E+00	U	8.37E+00	)	GAMMALL_GS	1.9615E+00	٠L	01/15/2007 18:25	<i>i</i> 1
6345299	CS-134	13967-70-9	-4.17E-01	pCi/L	2.0E+00	2.0E+00	U	3.62E+00	)	GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<i>i</i> 1
6345299	CS-137	10045-97-3	-6.48E-01	pCi/L	1.9E+00	1.9E+00	U	3.42E+00	)	GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<b>i</b> 1
6345299	EU-152	14683-23-9	1.26E-01	pCi/L	5.0E+00	5.0E+00	U	8.98E+00	)	GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<b>i</b> 1
6345299	EU-154	15585-10-1	1.04E+00	pCi/L	6.1E+00	6.1E+00	U	1.24E+01		GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<b>i</b> i
6345299	EU-155	14391-16-3	2.54E+00	pCi/L	4.2E+00	4.2E+00	U	7.65E+00	)	GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	5 1
6345299	K-40	13966-00-2	-2.63E+01	pCi/L	2.8E+01	2.8E+01	U	5.47E+01		GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<b>i</b> 1
6345299	RU-106	13967-48-1	4.13E+00	pCi/L	1.8E+01	1.8E+01	U	3.44E+01		GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	<b>5</b>
6345299	SB-125	14234-35-6	-2.69E-01	pCi/L	5.8E+00	5.8E+00	U	1.02E+01		GAMMALL_GS	1.9615E+00	L	01/15/2007 18:25	5 1
6345293	I-129L	15046-84-1	2.56E+00	pCi/L	4.5E-01	4.5E-01		2.33E-01	101.1	I129LL_SEP_LEPS	3.8864E+00	L	01/17/2007 17:27	7
6345303	TC-99	14133-76-7	4.00E+03	pCi/L	3.4E+01	2.5E+02		9.76E+00	100.0	TC99_ETVDSK_LS	1.251E-01	L	01/10/2007 23:22	2 1
6345304	Uranium	7440-61-1	1.68E+01	ug/L	2.0E+00	2.0E+00		8.25E-02		UTOT_KPA	2.54E-02	ML	01/17/2007 17:32	2
Lab Sample Id: 9JKX0610	Client : Id: B1L3J8	Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b> t S07-011	or Sdg Nbr: W05073	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		C	lection Date: 2006 11:46	
<b>Batc</b> h 6345297	Analyte H-3	CAS# 10028-17-8	Result 5.15E+03	<b>Unit</b> pCi/L	CntU 2S 2.6E+02	TotU 2\$ 3.5E+02	Quai	MDA 2,96E+02	TrcYield 2 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Time 01/06/2007 09:33	<b>Ac</b> 1
Lab Sample Id: 9JKX0710	Client: Id: B1L429	Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b>	or <b>Sdg</b> <b>Nbr:</b> W05073	••		Moisture/ Solids%*:	Distilled Volume			Ε	lection Date: 2006 10:48	. ******
<b>Batch</b> 6345297	Analyte H-3	<b>CAS#</b> 10028-17-8	Result 5.65E+03	<b>Unit</b> pCi/L	CntU 2S 2.7E+02	TotU 2S 3.7E+02	Qua	I MDA 2.96E+02	TrcYield 2 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Time 01/06/2007 12:16	Act
Lab Sample Id: 9JKX0A10		Test User	Contract Nbr MW6-SBB-A1	<b>SAF NI</b> W07-01	Nbr:			Moisture/ Solids%*:	Distilled Volume				lection Date: 2006 12:47	
<b>Batch</b> 6345303	Analyte TC-99	<b>CAS#</b> 14133-76-7	Result 5.91E+02	<b>Unit</b> pCi/L	CntU 2S 1.4E+01	TotU 2S 4.1E+01	Qua	MDA 9.78E+00	TrcYield 100.0	Method TC99_ETVDSK_LS	<b>Alq Size</b> 1.254E-01	Unit L	Analy Date/Time 01/11/2007 00:25	Ac

9JKX0E10 B1L5V7

Lab

Sample Id:

Client

ld:

rptFeadRadSummaryEdd v3.48

Test

User

Contract

Nbr

MW6-SBB-A1 W07-011

SAF Nbr

Sdg

W05073

Nbr:

Moisture/

Solids%\*:

Distilled

Volume

Sample

On Date:

QC

Type:

Collection

Date:

12/04/2006 10:32

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/22/200	7 3:10:23 PM	r			S	ΓL Ricl	hlar	nd Repor	t			1	Lab Code: STLRL	
FormNbr	r: 8,	FormatType: F	EAD <b>Versi</b>	on: 05	Rpt N	<b>br:</b> 34259		File Name: h	:\Reportdb\e	edd\FeadIV\Rad\W050	73.Edd, h:\Rep	ortdb\e	dd\FeadIV\Rad\34259.E	Edd
Batch	Analyte	CAS#	Result	Unit (	CntU 2S	TotU 2S	Qua	I MDA 1	rcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6345297	H-3	10028-17-8	5.41E+03	pCi/L	2.6E+02	3.6E+02		2.96E+02	100.0	906.0_H3_LSC	5.00E-03	L	01/06/2007 08:11	1
6345306	ALPHA	12587-46-1	3.20E-01	pCi/L	1.1E+00	1.1E+00	U	2.63E+00	100.0	9310_ALPHABETA	9.00E-02	L	01/12/2007 17:37	. !
6345308	BETA	12587-47-2	3.40E+01	pCi/L	3.6E+00	5.7E+00		3.83E+00	100.0	9310_ALPHABETA	1.481E-01	L	01/12/2007 15:18	i i
6345303	TC-99	14133-76-7	1.06E+02	pCi/L	6.8E+00	1.2E+01		9.67E+00	100.0	TC99_ETVDSK_LS	1.252E-01	L	01/11/2007 02:30	)
Lab Sample Id: 9JKXXH10		Test User	Contract Nbr MW6-SBB-A1	<b>SAF Nb</b> r S07-010	Sdg Nbr: W05073			Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date: 2006 10:52	
Batch	Analyte	CAS#	Result	Unit (	CntU 2S	TotU 2S	Qua	I MDA 1	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6345297	H-3	10028-17-8	3.81E+04	pCi/L	6.4E+02	1.6E+03		2.95E+02	100.0	906.0_H3_LSC	5.00E-03	L	01/06/2007 06:49	1
6345293	I-129L	15046-84-1	1.83E-01	pCi/L	1.5E-01	1.5E-01	U	3.04E-01	101.1	I129LL_SEP_LEPS	3.9458E+00	L	01/17/2007 19:11	į.

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

Test User

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK7161AB

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 11:46

Client Id:

SAF Nbr

NA

Contract Nbr

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

Case Nbr

**BLK** 

SAS Nbr

Received Date:

Distilled Volume

12/05/2006

SAFI		ntract Nbr S-SBB-A19981		est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R	
	(4)44.0	-055-A19901												AQ	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6345297 <b>BLK</b>	H-3 10028-17-8	4.62E+01	pCi/L	1.4E+02 1.2E+02	U	2.96E+02	2 100.0		906.0_H3_LS	C 5.00E-03 L	01/06/2007 01:23				D

Suffix

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK7161DX

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 11:46

RER/

Client Id:

NA

Contract Nbr

Matrix:

WATER

WATER

Decant

Sample On Date:

Moisture/Solids%\*:

Analyt/

CAS#

QC Type:

Case Nbr

BLK

Received Date:

12/05/2006

SAF Nbr

Batch # /

MW6-SBB-A19981 Result/ Orig Rst

Tot/Cnt Uncert 2S Unit

Qual

Tracer MDC Yield

SAS Nbr

Spk Conc/ %Rec

Suffix

Analy Method

Aliq Date/Time Size/ Analyzed

RPD/ UCL

File Id

LCS R LCL/UCL Typ

Η

FSuffix RTyp

AS

Qc Type 6345297 H-3 BLK 10028-17-8

-9.17E+01

pCi/L 1.3E+02 1.2E+02

Test User

3.02E+02 100.0

906.0 H3 LSC

5.00E-03 01/06/2007 UCL

D

L

**Distilled Volume** 

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK71W1AB

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/06/2006 11:42

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

12/06/2006

Moisture/Solids%\*:

QC Type:

BLK

**Received Date:** 

SAF Nbr

Contract Nbr MW6-SBB-A19981 Case Nbr

SAS Nbr Suffix Decant

Distilled Volume

File Id

FSuffix RTyp ΑU Н

Batch # / Analyt/ CAS#

Result/ **Orig Rst** 2.92E-02

Tot/Cnt Unit Uncert 2S pCi/L 1.4E-01

Test User

Qual MDC

Tracer Yield 100.5

Spk Conc/ %Rec

Analy Method Aliq Size/ Date/Time Analyzed

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ

Qc Type 6345293 I-129L BLK 15046-84-1

1.4E-01

2.62E-01

1129LL SEP L

3.568E+00 01/17/2007 L

21:00

D

STL Richland rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\V4259.Edd

Lab Sample Id:

JK71X1AB

Sdq/Rept Nbr: W05073

QC Type:

34259

Collection Date: 12/01/2006 11:27

Client Id:

NA

Matrix:

**WATER** 

WATER

Sample On Date: Received Date:

12/01/2006

Moisture/Solids%\*:

Contract Nbr

Case Nbr

SAS Nbr

Suffix

Decant

**Distilled Volume** 

File Id

FSuffix RTyp AW

SAF Nbr

Batch # /

Qc Type

6345294

BLK

MW6-SBB-A19981

Result/

Orig Rst

2.09E-02

Tot/Cnt Unit Uncert 2S

Test User

Qual pCi/L 2.1E-01

Tracer MDC Yield 4.68E-01 78.8

Spk Conc/ %Rec

Analy Method

Aliq Size/ Date/Time Analyzed

RPD/ RER/ UCL UCL

LCS

Н

4

LCL/UCL Typ

D

10098-97-2

SR-90

Analyt/

CAS#

1.2E-01

BLK

SRISO SEP P

1.002E+00 01/17/2007

06:53

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72C1AB

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 07:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BLK

Received Date:

12/01/2006

SAF		Contract Nbr V6-SBB-A19981		est User	Case	Nbr 5	SAS Nbr	Suffix	Decant D	stilled Volume	File	ld		FSuffix AY	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/U	R CL Typ
6345299	BE-7	-2.28E+00	pCi/L	2.8E+01	U	5.18E+0	1		GAMMALL_GS	2.0003E+00	01/15/2007				D
BLK	13966-02-4			2.8E+01						L	18:26				
6345299	CO-60	-1.28E+00	pCi/L	2.3E+00	U	3.84E+0	0		GAMMALL_GS	2.0003E+00	01/15/2007				D
BLK	10198-40-0	ı		2.3E+00						L	18:26				
6345299	CS-134	-2.59 <b>E-</b> 03	pCi/L	2.5E+00	U	4.63E+0	0	•	GAMMALL_GS	2.0003E+00	01/15/2007				D
BLK	13967-70-9			2.5E+00						L	18:26				
		1.01E-01	•	1.7E+00	U	3.31E+0	0		GAMMALL_GS	2.0003E+00	01/15/2007				D
BLK	10045-97-3			1.7E+00		*				L	18:26				
6345299		-5.69E+00	pCi/L		U	1.01E+0	1		GAMMALL_GS	2.0003E+00	01/15/2007				D
BLK	14683-23-9			6.3E+00						L.	18:26				
6345299	EU-154	-1.36E+00	pCi/L		U	1.21E+0	11		GAMMALL_GS	2.0003E+00	01/15/2007				D
BLK	15585-10-1			6.5E+00						L	18:26				
6345299	EU-155	-2.47E+00	pCi/L		, U	8.98E+0	0		GAMMALL_GS	2.0003E+00					D
BLK	14391-16-3			5.3E+00						L	18:26				
6345299		-2.26E+01	pCi/L		U	1.16E+0	12		GAMMALL_GS	2.0003E+00					D
BLK	13966-00-2			5.1E+01						L	18:26				
6345299		-4.35E+00	pCi/L		U	3.96E+0	)1		GAMMALL_GS	2.0003E+00					D
BLK	13967-48-1			2.2E+01						L	18:26				
6345299		4.65E+00	pCi/L		U	1.06E+0	11		GAMMALL_GS	2.0003E+00					D
BLK	14234 <b>-</b> 35-6	5		5.2E+00						L	18:26				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72H1AB

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 09:48

Client Id:

NA

Matrix:

WATER

WATER Sample On Date:

Moisture/Solids%\*:

QC Type:

BLK

Received Date: 12/05/2006

SAF		Contract Nbr W6-SBB-A19981	7	Test User	Case	Nbr S	SAS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix BA	RТур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst		Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/U	R CL Typ
6345301	BE-7	1.38E+01	pCi/L	2.1E+01	U	4.24E+0	1		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	13966-02 <b>-</b> 4	+		2.1E+01						L	20:13				
6345301	CO-60	-4.41E-01	pCi/L	2.1E+00	U	3.87E+0	0		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	10198-40-0	)		2.1E+00						L	20:13				
6345301	CS-134	-2.24E+00	pCi/L	1.9E+00	U	2.79E+0	0		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	13967-70-9	)		1.9E+00						L	20:13				
6345301	CS-137	6.64E-01	pCi/L	2.0E+00	U	3.82E+0	0		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	10045-97-3	3		2.0E+00						L	20:13				
6345301	EU-152	-1.48E+00	pCi/L	3.9E+00	U	6.72E+0	0		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	14683-23-9			3.9E+00						L	20:13				
6345301	EU-154	-1.97E+00	pCi/L	6.3E+00	U	1.14E+0	1		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	15585-10-1			6.3E+00						L	20:13				
6345301	EU-155	-5.55E-01	pCi/L	3.0E+00	U	5.25E+0	0		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	14391-16-3	3		3.0E+00	•					L	20:13				
6345301	K-40	-2.90E+01	pCi/L	3.8E+01	U	8.10E+0	11		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	13966-00-2	2		3.8E+01						L.	20:13				
6345301	RU-106	-5.70E+00	pCi/L	1.6E+01	U	2.85E+0	11		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	13967-48-1	I		1.6E+01						, L	20:13				
6345301	SB-125	-7.64E-02	pCi/L	4.0E+00	U	7.31E+0	00		GAMMA_GS	2.501E+00	01/15/2007				D
BLK	14234-35-6	5		4.0E+00						L	20:13				

STL Richland rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

QC Type:

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72J1AB

Contract Nbr

Matrix:

Sdg/Rept Nbr: W05073 WATER

34259

Collection Date: 12/04/2006 12:47

Client Id:

SAF Nbr

NA

WATER

Sample On Date:

12/04/2006

Moisture/Solids%\*:

**Test User** 

BLK

Received Date:

SAF		Contract Nbr MW6-SBB-A19981		'est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix I BC	RТур Н	
Batch # / Qc Type 6345303 BLK	Analyt/ CAS# TC-99 14133-76-7	Result/ Orig Rst 4.40E+00	<b>Unit</b> pCi/L	Tot/Cnt Uncert 2S 5.7E+00 4.0E+00	Qu- al ∪	<b>MDC</b> 9.38E+00	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method TC99_ETVDS	Aliq Size/ SK 1.25E-01 L	Date/Time Analyzed 01/11/2007 04:36	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CLTyp D	

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72M1AB

Sda/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 11:27

Client Id:

NA

Matrix:

**WATER** 

Sample On Date:

Moisture/Solids%\*:

QC Type:

BLK

WATER

**Received Date:** 

12/01/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Case Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp ΒE

Tot/Cnt Qual

MDC

Tracer Yield

Spk Conc/ Analy Method

Aliq Size/ Date/Time Analyzed

RPD/ RER/ UÇL UCL

LCS

Qc Type 6345304 Uranium

Batch # /

Analyt/ CAS#

Result/ Orig Rst -1.04E-02

Unit Uncert 2S 2.2E-03 ug/L

**Test User** 

SAS Nbr

%Rec UTOT\_KPA

2.55E-02

01/17/2007

LCL/UCL Typ

D

H

R

7440-61-1 BLK

2.2E-03

8.22E-02

ML 17:08

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72Q1AB

Sdq/Rept Nbr: W05073

34259

Collection Date: 12/04/2006 10:32

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

12/04/2006

Moisture/Solids%\*:

QC Type:

BLK

Tracer

Received Date:

RER/

UCL

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp BH Н

Batch # / Qc Type

BLK

Analyt/ CAS# 6345306 ALPHA 12587-46-1

Result/ Orig Rst -4.04E-02

Tot/Cnt Uncert 2S pCi/L 2.0E-01 2.0E-01

Qual

MDC Yield 5.94E-01 100.0

Spk Conc/ %Rec

Analy Method 9310\_ALPHAB

Aliq Size/ 1.998E-01

Date/Time Analyzed 01/12/2007 RPD/ UCL

LCS

R LCL/UCL Typ D

17:37

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

Analyt/

CAS#

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72R1AB

Sdg/Rept Nbr: W05073

34259

Suffix

Collection Date: 12/01/2006 10:22

Client Id:

Batch # /

Qc Type

6345308

NA

Matrix:

QC Type:

WATER

BLK

WATER

Decant

Sample On Date: Received Date:

12/01/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981

Result/

Orig Rst

5.20E-01

Tot/Cnt Unit

Test User

Uncert 2S

Qual MDC U

Case Nbr

Tracer Yield 2.52E+00 100.0

SAS Nbr

Spk Conc/ %Rec

Analy Method 9310 ALPHAB

Aliq Size/ 2.046E-01

Distilled Volume

Date/Time Analyzed 01/12/2007

RPD/ RER/ UCL UCL

File Id

LCS LCL/UCL Typ

FSuffix RTyp

Н

D

ΒJ

BETA BLK 12587-47-2 pCi/L 1.2E+00 1.2E+00

L

15:18

STL Richland rptFeadRadEdd v3.68

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK7161CS

Sdg/Rept Nbr: W05073

MDC

34259

Collection Date: 12/05/2006 11:46

Client Id:

Batch # /

Qc Type

6345297 H-3

NA

Matrix:

**WATER** 

Decant

Sample On Date:

File Id

Moisture/Solids%\*:

QC Type:

BS

WATER

Received Date:

12/05/2006

SAF Nbr Contract Nbr MW6-SBB-A19981

Analyt/

CAS#

Result/ Orig Rst

2.62E+03

Tot/Cnt Unit Uncert 2S pCi/L 2.5E+02

**Test User** 

Qual

Tracer Yield

SAS Nbr

Spk Conc/ %Rec 2.72E+03

Suffix

Analy Method 906.0 H3 LSC

Aliq Size/ 5.00E-03

**Distilled Volume** 

Date/Time RPD/ Analyzed UCL 01/06/2007

RER/ LCS UCL 70

LCL/UCL Typ D

FSuffix RTyp

Н

AR

BS 10028-17-8 2.0E+02

Case Nbr

2.96E+02 100.0

96.4

L 02:44 130

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK7161EM

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 11:46

Client Id:

NA

MW6-SBB-A19981

Matrix:

Case Nbr

WATER

WATER

Decant

Sample On Date: Received Date:

12/05/2006

SAF Nbr

Moisture/Solids%\*: Contract Nbr Test User QC Type: SAS Nbr

BS

Distilled Volume

6345297 H-3

Batch # /

Qc Type

Result/ Orig Rst

2.45E+03

Unit

Tot/Cnt Uncert 2S pCi/L 2.4E+02

Qu-MDC al 3.00E+02 100.0

Tracer Yield

Spk Conc/ %Rec 2.72E+03

Suffix

Analy Method 906.0\_H3\_LSC 5.00E-03

Aliq Size/ Analyzed 01/06/2007

Date/Time RPD/ UCL

File Id

RER/ LCS UCL

R LCL/UCL Typ

FSuffix RTyp

Н

AT

70 D

BS 10028-17-8

Analyt/

CAS#

2.0E+02

90.1

17:43

130

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK71W1CS

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/06/2006 11:42

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date:

12/06/2006

SAF		ntract Nbr 6-SBB-A19981		est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix I	RTyp H
Batch # / Qc Type 6345293 BS	Analyt/ CAS# I-129L 15046-84-1	Result/ Orig Rst 8.83E+00	Unit pCi/L	Tot/Cnt Uncert 2S 1.2E+00 1.2E+00	Qu- al	<b>MDC</b> 2.81E-01	Tracer Yield 101.0	Spk Conc/ %Rec 1.03E+01 85.9	Analy Method I129LL_SEP_	Aliq Size/ L 3.7381E+00 L	Date/Time Analyzed 01/17/2007 21:01	RPD/ UCL	RER/ UCL	LCS LCL/UC 70 130	R CL Typ D

Monday, January 22, 1	2007	S'	TL Richland	QC Control S	ample Repo	ort		Lab Code: STLRL
FormNbr: R		FormatType: FEAD	VersionNbr:	05 File Nar	ne: h:\Reportdb\edd	d\FeadIV\Rad\W0507	3.Edd, h:\Reportdb	\edd\FeadIV\Rad\34259.Edd
Lab Sample Id:	JK71X1CS	3	Sdg/Rept Nb	or: W05073	34259	Collec	tion Date: 12	/01/2006 11:27
Client Id:	NA		Matrix:	WATER	WATER	Sampl	le On Date:	
Moisture/Solids	%*:		QC Type:	BS		Receiv	ed Date: 12	/01/2006
	ontract Nbr 6-SBB-A19981	Test User	Case Nbr SAS	Nbr Suffix	Decant	Distilled Volume	File Id	FSuffix RTyp AX H
Batch # / Analyt/ Qc Type CAS#	Result/ Orig Rst	Tot/Cnt Unit Uncert 2S	Qu- al MDC	Tracer Spk Con Yield %Rec	c/ Analy Method	Aliq Size/		PD/ RER/ LCS R CL UCL LCL/UCL Typ
6345294 SR-90 BS 10098-97-2	1.50E+01	pCi/L 2.4E+00 8.9E-01	5.38E-01 6	68.6 1.35E+0 111.1	1 SRISO_SEF	P_P 1.0029E+00 L	01/17/2007 06:53	70 D 130

rptFeadRadEdd v3.68

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72C1CS

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 07:59

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date:

12/01/2006

SAF!		ontract Nbr /6-SBB-A19981	Т	est User	Case	Nbr	SAS Nbr	Suffix	Decant [	Distilled Volume	File	e ld	to the second second second	FSuffix I AZ	RТур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CL Typ
6345299	CO-60	3.03E+01	pCi/L	8.2E+00		5.12E+0	00	3.77E+01	GAMMALL_GS	2.0006E+00	01/15/2007			75	D
BS	10198-40-0			8.2E+00				80.5		L	18:26			125	
6345299	CS-137	2.13E+01	pCi/L	6.0E+00		4.92E+0	00	2.51E+01	GAMMALL_GS	3 2.0006E+00	01/15/2007			70	D
BS	10045-97-3			6.0E+00				84.8		L	18:26			130	
6345299	EU-152	7.71E+01	pCi/L	1.6E+01		1.29E+0	)1	7.67E+01	GAMMALL_GS	6 2.0006E+00	01/15/2007			70	D
BS	14683-23-9			1.6E+01				100.5		L	18:26			130	

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72H1CS

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 09:48

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date: 12/05/2006

SAF		Contract Nbr V6-SBB-A19981	Т	est User	Case		SAS Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix BB	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CL Typ
6345301 <b>BS</b>	CO-60 10198-40-0	3.01E+01	pCi/L	6.3E+00 6.3E+00		2.64E+00	0	3.03E+01 99.4	GAMMA_GS	2.5004E+00	01/15/2007 21:56			70	D
6345301	CS-137	1.72E+01	pCi/L	4.5E+00		3.97E+00	0	2.02E+01	GAMMA_GS	2.5004E+00				130 70	D
BS	10045-97-3			4.5E+00				85.2		L	21:56			130	
6345301 <b>BS</b>	EU-152 14683-23-9	5.07E+01	pCi/L	1.2E+01 1.2E+01		7.41E+0	0	6.12E+01 82.8	GAMMA_GS	2.5004E+00 L	01/15/2007 21:56			70 130	D

## STL Richland QC Control Sample Report

WATER

Lab Code: STI RL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72J1CS

Sdg/Rept Nbr: W05073

Suffix

34259

Collection Date: 12/04/2006 12:47

Client Id:

NA

MW6-SBB-A19981

Matrix:

Case Nbr

WATER Sample On Date:

Received Date:

12/04/2006

Moisture/Solids%\*: SAF Nbr Contract Nbr

Test User

QC Type: BS SAS Nbr

Decant

Distilled Volume

File Id

BD Н

R

Batch # / Analyt/ CAS# Qc Type 6345303 TC-99 BS 14133-76-7

Result/ **Orig Rst** 5.10E+02

Tot/Cnt Unit Uncert 2S pCi/L 3.6E+01 1.3E+01

Qu-MDC al 9.64E+00 100.0

Spk Conc/ Tracer %Rec Yield 5.34E+02 95.6

Analy Method TC99\_ETVDSK 1.256E-01

Aliq Size/

L

Date/Time Analyzed 01/11/2007

05:39

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ

FSuffix RTyp

D 75 125

STL Richland

rptFeadRadEdd v3.68

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72M1CS

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 11:27

Client Id:

NA

Matrix:

**WATER** 

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date:

SAF Nb		6-SBB-A19981	1	Test User	Case	Nbr S	SAS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix I BF	RTyp H
	Analyt/ CAS# Jranium /440-61-1	Result/ Orig Rst 3.75E+01	<b>U</b> nit ug/L	Tot/Cnt Uncert 2S 4.4E+00 4.4E+00	Qu- al	<b>MDC</b> 8.15E-02	Tracer Yield	Spk Conc/ %Rec 3.51E+01 106.6	Analy Method UTOT_KPA	Aliq Size/ 2.57E-02 ML	Date/Time Analyzed 01/17/2007 17:23	RPD/ UCL	RER/ UCL	LCS LCL/UC 75 125	R CL Typ D

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72M1DS

Sdq/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 11:27

Client Id:

NA

MW6-SBB-A19981

Matrix:

WATER

Suffix

WATER

Sample On Date:

12/01/2006

Moisture/Solids%\*: SAF Nbr Contract Nbr

7440-61-1

QC Type: Case Nbr

BS

SAS Nbr

Decant **Distilled Volume** 

Received Date:

Batch #/ Qc Type

6345304

BS

Result/ Analyt/ CAS# Orig Rst 3.90E+00 Uranium

ua/L

Test User

Tot/Cnt Uncert 2S 4.0E-01 4.0E-01

Qual MDC 8.25E-02

Spk Conc/ Tracer Yield

%Rec 3.54E+00 110.0

Analy Method UTOT\_KPA

Aliq Date/Time Size/ Analyzed 2.54E-02 01/17/2007 ML 17:25

RPD/ UCL

File Id

RER/ UCL

LCS LCL/UCL Typ

FSuffix RTyp

Н

R

BG

75 D

125

## STL Richland QC Control Sample Report

Lab Code: STLBL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h;\Reportdb\edd\FeadIV\Rad\W05073.Edd, h;\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72Q1CS

Sdg/Rept Nbr: W05073

WATER

34259

Collection Date: 12/04/2006 10:32

Client Id:

Qc Type

6345306

NA

Matrix:

WATER

Sample On Date:

12/04/2006

Moisture/Solids%\*: SAF Nbr Contract Nbr

QC Type: Case Nbr

BS

Decant

**Received Date:** 

File Id

MW6-SBB-A19981 Result/ Batch # / Analyt/

CAS#

Orig Rst 1.96E+01

Tot/Cnt Uncert 2S Unit pCi/L 5.0E+00

Test User

Qual MDC 6.36E-01

Spk Conc/ Tracer Yield 2.24E+01 100.0

Analy Method 9310 ALPHAB

Aliq Size/ 2.018E-01

Distilled Volume

Date/Time Analyzed 01/12/2007

RPD/ RER/ LCS UCL UCL

LCL/UCL Typ 70

FSuffix RTyp

Н

R

ВΙ

D

ALPHA BS 12587-46-1

2.0E+00

SAS Nbr

87.4

%Rec

Suffix

17:37

130

STL Richland

rptFeadRadEdd v3.68

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK72R1CS

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 10:22

Client Id:

NA

Matrix:

WATER

WATER

Decant

Sample On Date:

SAF Nbr

Contract Nbr MW6-SBB-A19981

QC Type: Case Nbr SAS Nbr

BS

Received Date: **Distilled Volume** 

12/01/2006

Batch # / Analyt/ Qc Type CAS# 6345308 BETA

Result/ Orig Rst 2.28E+01

Tot/Cnt Unit Uncert 2S pCi/L 3.7E+00

Qu-MDC al

Tracer Yield

Spk Conc/ %Rec 2.24E+01

Analy Method 9310 ALPHAB

Aliq Size/ Analyzed 2.022E-01 01/12/2007

Date/Time RPD/ RER/ UCL UCL

File Id

LCS R LCL/UCL Typ

FSuffix RTyp

Н

BK

70 D

12587-47-2 BS

2.4E+00

**Test User** 

2.42E+00 100.0

101.7

Suffix

15:18

130

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

21

## STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK3QJ1CR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 09:48

Client Id:

B1L1P0

3.52E+00

2.41E+00

pCi/L 3.9E+00

3.9E+00

U

7.76E+00

Matrix:

WATER WATER

Sample On Date:

2.5021E+00 01/15/2007

20:13

37.6

20.0

0.4

3

Received Date: 12/05/2006

Moisture/Solids%\*:

QC Type:

DUP

SAF	Nbr Co	ntract Nbr	T	est User	Case	Nbr SA	AS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix RTyp	
107-00	)7 MW6	S-SBB-A19981										,		AO H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS R	)
6345301	BE-7	-1.14E+00	pCi/L	1.8E+01	U	3.32E+01			GAMMA_GS	2.5021E+00	01/15/2007	231.4	1.3	D	
DUP	13966-02-4	1.57E+01		1.8E+01						L	20:13	20.0	3		
6345301	CO-60	-2.77E-01	pCi/L	1.5E+00	U	2.88E+00			GAMMA_GS	2.5021E+00		288.0	1.7	D	
DUP	10198-40-0	1.54E+00		1.5E+00						L	20:13	20.0	3	9	
6345301	CS-134	-2.42E-01	pCi/L	1.6E+00	U	2.89E+00			GAMMA_GS	2.5021E+00		771.2	0.6	D	
DUP	13967-70-9	4.12E-01		1.6E+00					_	L	20:13	20.0	3	2	
6345301	CS-137	-1.39E-01	pCi/L	1.7E+00	U	3.06E+00			GAMMA_GS	2.5021E+00		0.0	0.2	D	
DUP	10045-97-3	4.64E-02		1.7E+00					<del></del>	L	20:13	20.0	3	5	
6345301	EU-152	3.48E+00	pCi/L	4.3E+00	U	8.22E+00			GAMMA_GS	2.5021E+00		281.0	1.4	D	
DUP	14683-23-9	-5.86E-01		4.3E+00						L	20:13	20.0	3		
6345301	EU-154	2.69E-01	pCi/L	4.9E+00	U	9.73E+00			GAMMA_GS	2.5021E+00		0.0	1.3	D	
DUP	15585-10-1	-4.27E+00		4.9E+00						L	20:13	20.0	3	J	
6345301	EU-155	-2.78E-01	pCi/L	3.0E+00	U	5.31E+00			GAMMA_GS	2.5021E+00		0.0	0.2	D.	
DUP	14391-16-3	2.13E-01		3.0E+00					-	1	20:13	20.0	3		
6345301	K-40	2.08E+01	pCi/L	2.5E+01	U	5.81E+01			GAMMA_GS	2.5021E+00		180.9	1.1	D	
DUP	13966-00-2	1.04E+00	•	2.5E+01					фалар	1	20:13	20.0	3	U	
6345301	RU-106	-7.20E+00	pCi/L	1.5E+01	U	2.63E+01			GAMMA GS	2.5021E+00		0.0	0.	D	
DUP	13967-48-1	-7.44E+00	•	1.5E+01						1	20:13	20.0	3	U	
0045004	00 405					_				-	20.10	£.0.0	J		

6345301

DUP

SB-125

14234-35-6

GAMMA\_GS

D

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JK4W71DR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/06/2006 11:42

Client Id:

B1L274

Matrix:

QC Type:

WATER

Sample On Date:

Moisture/Solids%\*:

DUP

WATER

Received Date:

12/06/2006

<b>SAF</b> 107-01		ntract Nbr 6-SBB-A19981	7	rest User		Nbr S	AS Nbr	Suffix		Distilled Volume	File	e ld	· · · · · · · · · · · · · · · · · · ·	FSuffix AP	RTyp H
Batch # / Qc Type 6345293 DUP	Analyt/ CAS# I-129L 15046-84-1	Result/ Orig Rst -3.40E-02 1.55E-02	<b>Unit</b> pCi/L	Tot/Cnt Uncert 2S 1.2E-01 1.2E-01	Qu- al U	MDC 2.18E-01	Tracer Yield 99.2	Spk Conc/ %Rec	Analy Method I129LL_SEP_I	Aliq Size/ L 3.7415E+00 L	Date/Time Analyzed 01/17/2007 19:13	RPD/ UCL 0.0 20.0	RER/ UCL 0.6 3	LCS LCL/UC	R CL Typ D

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

## STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKPL61DR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 10:22

Client Id:

B1L3R4

Matrix:

**WATER** 

WATER Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

Received Date:

12/01/2006

<b>SAF</b> I S07-0	Nbr Co	Contract Nbr Te MW6-SBB-A19981		est User	st User Case Nbr		AS Nbr	Suffix		Distilled Volume		File Id		FSuffix RTyp BL H		
Batch # / Qc Type 6345308	Analyt/ CAS# BETA	Result/ Orig Rst 6.76E+00	Unit pCi/L	Tot/Cnt Uncert 2S 1.9E+00	Qu- al	MDC 2.60E+00	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method 9310_ALPHAE	Aliq Size/ 3 2.028E-01	Date/Time Analyzed 01/12/2007	RPD/ UCL 11.8	RER/ UCL 0.6	LCS LCL/UC	R CL Typ D	
DUP	12587-47-2	6.00E+00		1.7E+00						L	15:18	20.0	3			

24

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

## STL Richland OC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKPLL1GR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 11:27

Client Id:

B1KLX1

Matrix: QC Type: WATER

WATER

Sample On Date:

12/01/2006

Moisture/Solids%\*: SAF Nbr

Contract Nbr MW6-SBB-A19981 Case Nbr

DUP Suffix

Decant

Received Date:

107-002

Result/ Orig Rst

Tot/Cnt Uncert 2S

**Test User** 

Qu-MDC al 4.33E-01

Tracer Yield 82.6

SAS Nbr

Spk Conc/ Analy %Rec Method

Date/Time Aliq Size/ Analyzed 1.0006E+00 01/17/2007

RER/ RPD/ UCL UCL 60.4 1.3

LCS LCL/UCL Typ

FSuffix RTyp

Н

D

R

ВМ

Batch # / Qc Type 6345294 DUP

CAS# SR-90 10098-97-2

Analyt

2.26E-01 4.22E-01 pCi/L 2.2E-01 2.2E-01

SRISO SEP P L 06:53

**Distilled Volume** 

20.0 3

File Id

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKPLR1DR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 11:27

RER/

Client Id:

B1KPW0

Matrix: QC Type: WATER

DUP

Yield

WATER

Sample On Date: Received Date:

12/01/2006

SAF Nbr S07-010

Contract Nbr MW6-SBB-A19981 Test User Case Nbr

SAS Nbr

Suffix

Decant

**Distilled Volume** 

File Id

FSuffix RTyp BN Н

R

Batch # / Analyt/ Qc Type CAS# 6345304 Uranium DUP 7440-61-1

Result/ Orig Rst 5.41E+00 5.42E+00

Tot/Cnt Unit Uncert 2S ug/L 6.4E-01 6.4E-01

Qu-MDC ai 8.03E-02 Tracer Spk Conc/ %Rec

Analy Method UTOT\_KPA

Aliq Date/Time Size/ Analyzed 2.61E-02 01/17/2007

UCL UCL .3 0.

RPD/

LCS LCL/UCL Typ D

ML17:31 20.0 3

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

# STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKPLT1GR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 07:59

Client Id:

B1KR25

Matrix:

WATER

WATER

Sample On Date:

Mois	ture/Solic	ls%*:			. (	C Type:	DUP			Recei	ved Date:	12/01/2	9006	
<b>SAF 1</b> S07-0		Contract Nbr IW6-SBB-A19981	Т	est User	Case	Nbr SA	AS Nbr	Suffix	Decant D	istilled Volume	File	e ld		FSuffix RTyp BO H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ
6345299	BE-7	-1.03E+01	pCi/L	3.0E+01	U	5.15E+01			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	0.5	D
DUP	13966-02-	4 6.82E-01		3.0E+01			•			L	20:11	20.0	3	
6345299	CO-60	1.08E+01	pCi/L	4.5E+00		4.62E+00			GAMMALL_GS	1.9441E+00	01/15/2007	44.2	1.2	D
DUP	10198-40-	0 6.91E+00		4.5E+00						L	20:11	20.0	3	
6345299	CS-134	6.55E-01	pCi/L	2.2E+00	U	4.52E+00			GAMMALL_GS	1.9441E+00	01/15/2007	903.5	0.7	D
DUP	13967-70-	9 -4.17E-01		2.2E+00						L	20:11	20.0	3	
6345299	CS-137	5.70E-01	pCi/L	2.0E+00	U	3.91E+00			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	0.9	D
DUP	10045-97-	3 -6.48E-01		2.0E+00						L	20:11	20.0	3	
6345299	EU-152	-2.55E+00	pCi/L	5.5E+00	U	9.24E+00			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	0.7	D
DUP	14683-23-	9 1.26E-01		5.5E+00						L	20:11	20.0	3	
6345299	EU-154	-1.95E+00	pCi/L	6.8E+00	U	1.28E+01			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	0.6	D
DUP	15585-10-	-1 1.04E+00		6.8E+00						L.	20:11	20.0	3	
6345299	EU-155	-4.81E+00	pCi/L	4.6E+00	U	7.04E+00			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	2.3	D
DUP	14391-16-	-3 2.54E+00		4.6E+00						L	20:11	20.0	3	
6345299	K-40	2.25E+00	pCi/L	4.3E+01	U	4.68E+01			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	0.9	D
DUP	13966-00-	-2 -2.63E+01		4.3E+01					•	L	20:11	20.0	3	
6345299	RU-106	-1.75E+01	pCi/L	2.0E+01	U	3.12E+01			GAMMALL_GS	1.9441E+00	01/15/2007	0.0	1.6	D
DUP	13967-48-	-1 4.13E+00		2.0E+01						L	20:11	20.0	3	
6345299	SB-125	1.07E+00	pCi/L	5.2E+00	U	9.85E+00			GAMMALL_GS	1.9441E+00	01/15/2007	334.9	0.4	D
DUP	14234-35	-6 -2.69E-01		5.2E+00						L	20:11	20.0	3	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKX061CR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/05/2006 11:46

Client Id:

B1L3J8

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

Received Date:

12/05/2006

<b>SAF N</b> S07-01		ontract Nbr 6-SBB-A19981			Case	Nbr SA	S Nbr	Suffix		Distilled Volume	File	e ld		FSuffix F	₹Тур Н
Batch # / Qc Type 6345297 DUP	Analyt/ CAS# H-3 10028-17-8	Result/ Orig Rst 4.60E+03 5.15E+03	Unit Unit Did pCi/L 3.2	<b>Tot/Cnt</b> Incert <b>2S</b> 2E+02 5E+02	Qu- al	MDC 2.95E+02	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method 906.0_H3_LSC	Aliq Size/ C 5.00E-03 L	Date/Time Analyzed 01/06/2007 10:54	RPD/ UCL 11.2 20.0	RER/ UCL 2.4 3	LCS LCL/UC	R L Typ D

STL Richland OC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKX0A1CR

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/04/2006 12:47

RER/

Client Id:

B1L674

Matrix: QC Type: WATER

DUP

WATER

Sample On Date: Received Date:

12/04/2006

Moisture/Solids%\*:

Analyt/

CAS#

Contract Nbr

Case Nbr SAS Nbr Suffix

Decant

**Distilled Volume** 

File Id

FSuffix RTyp BR Н

SAF Nbr W07-011

MW6-SBB-A19981 Result/

Tot/Cnt **Uncert 2S** 

Test User

Tracer Qual MDC Yield

Spk Conc/ %Rec

Analy Aliq Method Size/ TC99\_ETVDSK 1.259E-01

Date/Time Analyzed 01/11/2007

UCL UCL 0. .1

LCS R

Qc Type 6345303 TC-99 DUP

Batch # /

14133-76-7

5.91E+02 5.91E+02

Orig Rst

pCi/L 4.1E+01 1.4E+01

9.56E+00 100.0

RPD/

LCL/UCL Typ D

3 01:28 20.0

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKX0E1GR

Sdg/Rept Nbr: W05073

WATER

34259

Collection Date: 12/04/2006 10:32

Client Id:

B1L5V7

Matrix:

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

Received Date:

12/04/2006

<b>SAF I</b> W07-0		ntract Nbr -SBB-A19981	Т	est User	Case	Nbr SA	S Nbr	Suffix	Decant I	Distilled Volume	File	e Id	İ	FSuffix R	<b>Тур</b> Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6345306 DUP	ALPHA 12587-46-1	1.60E+00 3.20E-01	pCi/L	1.7E+00 1.6E+00	U	2.88E+00	100.0		9310_ALPHAE	9.32E-02 L	01/12/2007 17:37	133.5 20.0	1.1 3		D

STL Richland Qc Matrix Spike Report

Lab Code: STLBL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

Lab Sample Id:

JKPLT1HW

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/01/2006 07:59

Client Id:

**B1KR25** 

Matrix:

WATER **WATER**  Sample On Date:

12/01/2006

Moisture/Solids%\*:

QC Type:

MS

Received Date:

<b>SAF</b> S07-0		ontract Nbr 6-SBB-A19981	T	Fest User	Case Nbi	r SA	AS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix I BP	RTyp H
Batch # / Qc Type 6345304 MS	Analyt/ CAS# Uranium 7440-61-1	Result/ Orig Rst 3.86E+01	<b>Unit</b> ug/L	Tot/Cnt Uncert 2S 6.8E+00 6.8E+00		<b>MDC</b> 09E-02	Tracer Yield	Spk Conc/ %Rec 3.47E+01 111.3	Analy Method UTOT_KPA	Aliq Size/ 2.59E-02 ML	Date/Time Analyzed 01/17/2007 17:34	RPD/ UCL	RER/ UCL	LCS LCL/UC 60 140	R CL Typ D

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

3.0E+01

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05073.Edd, h:\Reportdb\edd\FeadIV\Rad\34259.Edd

Lab Sample Id:

JKX0E1FW

Sdg/Rept Nbr: W05073

34259

Collection Date: 12/04/2006 10:32

03:33

Client Id:

MS

B1L5V7

Matrix:

WATER

WATER

Sample On Date:

140

Moisture/Solids%\*:

14133-76-7

QC Type:

MS

Received Date:

12/04/2006

W07-0		S-SBB-A19981	'	est oser	Case	NDF 5A	2 MDL	Sumx	Decant	Distilled volume	FIR	e Iu		BS BS	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6345303	TC-99	3.11E+03	pCi/L	2.0E+02		9.32E+00	100.0	3.57E+03	TC99_ETVDS	< 1.258E-01	01/11/2007			60	D

87.3

**Drinking Water Method Cross References** 

,	DRINKING WATER	R ASTM METHOD CROSS REFERENCES
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-24	11 (unless otherwise	specified in the case narrative)
The Gross Beta LCS is prepared with Sr/Y-90	) (unless otherwise s	pecified in the case narrative)

# **Uncertainty Estimation**

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants \* f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u<sub>i</sub>) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sumof-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u<sub>c</sub>) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

**Report Definitions** 

	(88) 83	
	Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
	Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
	Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
	COC No	Chain of Custody Number assigned by the Client or STL Richland.
	Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
	Total Uncert (#s)  u <sub>c</sub> Combined  Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, $u_c$ the combined uncertainty. The uncertainty is absolute and in the same units as the result.
	(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
	CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
	Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
	Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
	MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency. Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
i	Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
	Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
	Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
	Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
	Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the <b>Work Order</b> Number.
	RER	The equation Replicate Error Ratio = $(S-D)/[sqrt(TPUs^2 + TPUd^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
:	SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
	Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
	Work Order	The LIMS software assign test specific identifier.
	Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

### ntblFeadIVWetHEdd

Form	NForm	SRec	Format	Γ√Vers	id SampleNbr	Contract	LabCode	LabCCase SAS SDGNbr
W	AA	Н	FEAD	05	B1L6H2	MW6-SBB-A19981	STLRL	W05073
W	AB	H	FEAD	05	B1L6F8	MW6-SBB-A19981	STLRL	W05073
w	AC	Н	FEAD	05	B1L6F3	MW6-SBB-A19981	STLRL	W05073
w	ΔD	Н	FEAD	05	B1L6C8	MW6-SBB-A19981	STLRL	W05073
W	ΑE	Н	FEAD	05	B1L6C3	MW6-SBB-A19981	STLRL	W05073
W	AF	Н	FEAD	05	B1L6D3	MW6-SBB-A19981	STLRL	W05073
W	AG	Н	FEAD	05	B1L6H2	MW6-SBB-A19981	STLRL	W05073
W	AH	H	FEAD	05	NA	MW6-SBB-A19981	STLRL	W05073
W	ΑI	Н	FEAD	05	NA	MW6-SBB-A19981	STLRL	W05073
W	AJ	Н	FEAD	05	B1L6D3	MW6-SBB-A19981	STLAL	W05073
W	AK	Н	FEAD	05	NA	MW6-SBB-A19981	STLRL	W05073
W	AL	Н	FEAD	05	NA	MW6-SBB-A19981	STLRL	W05073

AnalyticalMatrix	LabReceivedDate	CollectedDate	PercentScDecante	LabSampleId	LabFilel	SafNbr
WATER	12/06/2006	12/06/2006	9,1	K31710		
WATER	12/05/2006	12/05/2006	9.11	KXVD10		
WATER	12/05/2006	12/05/2006	9.11	KXVG10		
WATER	12/05/2006	12/05/2006	9JF	KXVK10		
WATER	12/05/2006	12/05/2006	9.14	KXVM10		
WATER	12/05/2006	12/05/2006	9.1	KXVQ10		
WATER	12/06/2006	12/06/2006	JKS	3171DR		
WATER	12/05/2006	12/05/2006	JK	7101AB		
WATER	12/05/2006	12/05/2006	JK	7101AC		
WATER	12/05/2006	12/05/2006	JKX	XVQ1DR		
WATER	12/06/2006	12/06/2006	JM	6RE1AB		
WATER	12/06/2006	12/06/2006	JM	6RE1AC		

CollectedTime	PercentM	Filename	SpecificMat
13:14	-	h:\Reportdb\edd\FeadIV\Wet\W0507	A
13:59		h:\Reportdb\edd\FeadIV\Wet\W0507	
13:16		h:\Reportdb\edd\FeadIV\Wet\W0507	
11:54		h:\Reportdb\edd\FeadiV\Wet\W0507	
10:25		h:\Reportdb\edd\FeadIV\Wet\W0507	
11:12		h:\Reportdb\edd\Feadf\/\Wet\W0507	
13:14		h:\Reportdb\edd\FeadIV\Wet\W0507	
15:40		h:\Reportdb\edd\FeadIV\Wet\W0507	
15:40		h:\Reportdb\edd\FeadIV\Wet\W0507	
11:12		h:\Reportdb\edd\FeadIV\Wet\W0507	
15:33	1	n:\Reportdb\edd\FeadIV\Wet\W0507	
15:33		n:\Reportdb\edd\FeadIV\Wet\W0507	

FormNbr	FormSuffix	RecordType	CASNbr	Isotope	Result
W	AA	n	COLIFORM	COLIFORM	+1.00F+00
M	AR	ח	COLIFORM	COLIFORM	+1 00F+00
W	AC	ח	COLIFORM	COLIFORM	+1 00F+00
W	AD	Ŋ	COLIFORM	COLIFORM	+3 45F+02
W	ΔF	n	COLIFORM	COLIFORM	+1 NNF+NN
W	AF	D	COLIFORM	COLIFORM	+1 00F+00
W	AG	D	COLIFORM	COLIFORM	+1 00F+00
W	АН	D	COLIFORM	COLIFORM	+1 NNF+NN
M	Al	U	COLIFORM	COLIFORM	+9 70F+00
W	A.1	D	COLIFORM	COLIFORM	+1 00F+00
[M	AK	D	COLIFORM	COLIFORM	+1 00F+00
IW	AL		_COLIFORM	COLIFORM	+2 63F+02

OrigResult	ConcentrationU	ActionCode	AnalysisMethod	SampleAliquotS	SampleAliquotU
	Col/100ml I		9223 COLIEO	+1 00F+02	MI
	Cal/100mi I		9223 COLIFO	+1 00F+02	MI
	Col/100ml I		9223 COLIFO	+1 00F+02	Mi
	Col/100ml L		9223 COLIFO	+1 00F+02	MI
	Col/100ml I		9223 COLIFO	+1 00F+02	Mi
	Col/100ml I		9223 COLIFO	+1 00F+02	MI
	Col/100ml I		9223 COLIFO	+1 00F+02	MI
	Col/100ml		9223 COLIFO	+1 NNF+N2	IM I
	Col/100ml I		9223 COLIFO	+1 00F+02	MI
	Col/100mt L		9223 COLIFO	+1 NNF+N2	MI
l I	Col/100ml 1		9223 COLIFO	+1 በበF+በ2	MI
	Col/100ml 1	T	9223 COLIFO	+1.00F+02	MI

LabQualifier	DilutionFactor	DateAnalyzed	TimeAnalyzed	BatchNbr	QcType
1	1	12/06/2006	00·00	7022272	
k i	1	12/05/2006	00.00	6345295	
[ ]	1	12/05/2006	UU-UU	6345295	
	1	12/05/2006	∩∩·∩∩	6345295	
11	1	12/05/2006	∩∩-∩∩	6345295	
l I	1	12/05/2006	UU-UU	6345295	
[ ]	1	12/06/2006	00.00	7022272	DUP
II 1	1	12/05/2006	∩ <b>∪</b> .∪∪	6345295	RIK
•	1	12/05/2006	00·00	6345295	RS
H	1	12/05/2006	UU-UU	6345295	DI IP
	1	12/06/2006	00.00	7022272	RI K
	1	12/06/2006	00:00	7022272	BS

# rtblFeadIVWetDEdd

1/22/2007

SpikeConc	PercentRecover	Rpd	RpdMaximum	Rpd_UCL	LCSMS_LCL
	0				
	n				

# rtblFeadIVWetDEdd

### 1/22/2007

LCS_UCL	TracerYield	DetectionLimit	RL	RLType	CommentCode
		1 00F+00	1 00F+00	BDI	
		1 00F+00	1 00F+00	RDI	
		1 በበF+በበ	1 00F+00	RDI	ì
		1 በበF+በበ	1 00F+00	BUI	
		1 00F+00	1 00F+00	RNI	
		1 NNF+NN	1 00F+00	RDI	
		1 00F+00	1 00F+00	RNI	
		1 00F+00	1 00F+00	RDI	
		1 NNF+NN	1 00F+00	RDI	
		1 00F+00	1 NNF+NN	RNI	
		1 00F+00	1 00F+00	RDI	
L		1_00E+00	1.00E+00	RDI	i

SEVERN Data Review/Verification Checklist STL 1/16/2007 8:32:55 AM TRENT RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6L020192,J6L020189,J6L060373; 01/22/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6345306; RALPHA-A Alpha by GPC-Am SDG, Matrix: W05073; WATER 8.0 Correction Calculation Protocol Used. No N/A OK 8.01 The Appropriate Methods Were Used To Analyze the Samples No N/A Yeş⊮ 8.02 Final Results Are in the Appropriate Activity Units Yeş No N/A 8.03 Batch Contains the Required QC Appropriate for the Method No N/A The Correct Tracer and QC Vials Where Used in the Samples No N/A OK 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yeş No N/A OK 8.06 At Least the Minimum Sample Volume Was Used Yes No N/A Analysis Volume => JKX0E1AC 90.00<200.00 Q:VB 8.07 The Correct Count Geometry was Used. Yes No N/A 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yeş No N/A 8.09 Method Blank is within Control Limits. Yeş No N/A OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/Ax No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). Yes No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yes No N/A RPD > UCL: 20.0=> JKX0E1AG ALPHA 130.0 (RPD) 8.14 LCS within Control Limits. No N/A OK 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/A No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. Yeş No N/A 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) No N/A 8.19 Sample Specific MDC <= CRDL No N/A OK 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag. Yes No N/A No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. Yes Nov N/A Batch Positive Result => JKPLL1AC ALPHA 3.8E+00 L:1.8E+00 JKPL61AA ALPHA 1.5E+00 L:1.3E+00 8.23 Result <= Action Level, when Defined No N/A OK; No Action Level Found => ALPHA OK; No Callin Level Found => ALPHA 8.24 Result + 3s >=0, Not Too Negative. No N/A 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data! STL Richland QAS\_RADCALCv4.8.26 Page 1

STL RICHLAND

0.00				
0.20	Instruments have Current Calibrations.	Yes	No	N/A
	Correct Count Library Used.  No Count Library found in Batch Data!	Yes	No	N/A
	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version	nk)s	No	N/A
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	<b>V¥esi</b> o	on <b>Neò</b> .	N/A
8.3 (	Comments:			
8.31	Results Blank Subtracted as Appropriate. OK	Yeş	No	N/A

First Level Review

Date 11/0/07



QC Batch Number:	6545306
	WU5073

Review Item	T37 (-1)	137 (1)	15-2:
A. Sample Analysis	Yes (√)	No (√)	N/A (√)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			1
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4 Is the blank result > the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			<del>                                      </del>
Comments on any "No" response:			·
			and the same of th
Second Level Review Thing ( Udam	,	Date: _/	1-16-09
A			/

TRENT STL	Data Review/Verification Checklist  RADIOCHEMISTRY, First Level Review  1/16/20	007 8:2	9:56	AN 6
Lot No., Due Date:	J6L020192,J6L020189,J6L060373; 01/22/2007			-
Client, Site:	384868; PGW 615HANFORD HANFORD			
QC Batch No., Method Te	est: 6345308; RBETA-SR Beta by GPC-Sr/Y			
SDG, Matrix:				
	W05073; WATER			
8.0 Correction Calculation Pro	otocol Used.	Yes	No	N/
8.01 The Appropriate Method	s Were Used To Analyze the Samples	Yeş	No	NI/
OK 3.02 Final Results Are in the		V	,,,,	, 47.
OK	Appropriate Activity Units	Yes	No	N/.
3.03 Batch Contains the Requ	sired QC Appropriate for the Method	Yeş	No	N/
OK 3.04 The Correct Tracer and	QC Vials Where Used in the Samples	V		
ОК		Yes	No	N/
3.05 Sample was Appropriate OK	ly Traced Before or After Fractionating the Sample	Yeş	No	N/
3.06 At Least the Minimum Sa	ample Volume Was Used	V	Ma	
Analysis Volume => JKX0E1	AD 148.10<200.00 Q:VB	Yes	V	/ N/.
3.07 The Correct Count Geon OK	netry was Used.	Yes	No	N/.
3.08 The Sample was Counte	d for the Minimum Count Time or CRDL was Achieved.	Yeş	Nο	NI/
OK 3.09 Method Blank is within C	Ontrol Limita	V		
OK	ondoi Limits.	Yes	No	N/
3.1 Comments:				
.11 Matrix Blank is within Col	atrol Limits			
No Matrix Blanks (MBlks) for	nd in Batch!	Yes	No	N/.
5.12 Method Blank(s) < QAS I OK	imit Value (No B Flag Necessary).	Yeş	No	N/
	Equation Value within Control Limits.	<b>V</b> :		
OK (RPD)		Yeş	NO	N/
.14 LCS within Control Limits OK		Yes	No	N/A
.15 MLCS within Control Limi	ts.	Yes	No	N/
No Matrix Spikes (MLCS) fou .16 MS within Control Limits.	nd in Batch!	163	IVO	V
No Matrix Spike Samples (M	S) found in Batch!	Yes	No	N/A
.17 Tracer within Control Lim	its.	Yeş	No	N/A
OK .18 Samples are above Minin	num Tracer Yield (No Failed Samples)	V		
OK		Yes	No	N//
.19 Sample Specific MDC <=	CRDL.	Yeş	No	N/A
OK 2 Comments:		<b>V</b>		
21 Result < Lc, Activity Not E No Limit Specified!	Detected, U Flag.	Yes	No	N/A
22 Result < Mdc, Activity Not	Detected, U Flag.	Yes	Na	N//
Batch Positive Result => JKPLL1AD BETA 1.1E+01 L:		103	V	1412
JKPL61AC BETA 6.0E+00 L	:2.7E+00			
JKX0E1AD BETA 3.4E+01.1 23 Result <= Action Level, w				
OK; No Action Level Found =		Yeş	Vo	N/A
OK; No Callin Level Found	=> BFTA	4		
24 Result + 3s >=0, Not Too	Negative.	Yeş/ i	٧o	NI/A
OK .	and the state of the experience of the control of t	V		1411
L Richland				
S_RADCALCv4.8.26		Page 1		

Ī	8.25 Counting Spectrum are within FWHM Limits.	Yes	No	N/A
١	No FWHM found in Batch Data!	, 00		J
	8.26 Instruments have Current Calibrations.	Yes	No	N/A
ŀ	8.27 Correct Count Library Used.	Von	-14	NI/A
	No Count Library found in Batch Datal			N/A
ŀ	8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version.	ion <b>ićes</b>	No	N/A
1	8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in late	r Weesin	⊃ <b>n%eò</b> .	N/A
1	8.3 Comments:			
8	8.31 Results Blank Subtracted as Appropriate.			
	ок	Yes	No	N/A
ľ			- +1+	

First Level Review

STL-Richland

Pan anderson

Page 2



OC Batch Number:	6345308
	WOSAKS

Review Item	Yes (√)	No (V)	NT/A (-1)
A. Sample Analysis	103(1)	140 ( 4 )	$N/A(\sqrt{)}$
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?		<del> </del>	
B. QC Samples		-	_
1. Is the Minimum Detectable Activity for the blank result ≤ the			j
Confider Defection Limit?			i
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			<del> </del>
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?		-	<del>                                     </del>
7. Is the LCS Minimum Detectable Activity \le the Contract Detection		<del> </del>	
Limit?	and the same of th		
8. Do the MS/MSD results and yields meet acceptance criteria?			<del>                                     </del>
9. Do the duplicate sample results and yields meet acceptance			
chteria?		-	
C. Other			<del> </del>
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			
Comments on any "No" response:			
			-
Second Level Review Thirtyl A Ada,	~	Detail	1-16-

SEVERN SIL 15 15 15 15 16

# Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/17/2007 4:30:23 PM

Lot No., Due Date:

J6L080235, J6L020189; 01/22/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6345294; RSR85907 Sr-85/90 by GPC-7

SDG, Matrix:

W05073: WATER

	<u></u>		
	1	0.	COC
ı,		.1	

OC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

- 2.0 QC Batch
- 2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yeş No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yeşr No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

No N/A

#### 3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yeş No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yeş No N/A

3.5 Are the sample yields and MDAs within contract limits?

No N/A

#### 4.0 Raw Data

4.1 Were results calculated in the correct units?

No N/A

4.2 Were analysis volumes entered correctly?

No N/A Yes Yes No N/A

4.3 Were Yields entered correctly?

Yeş No N/A

4.4 Were spectra reviewed/meet contractual requirements?

No N/A

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

#### 5.0 Other 15.1 Are all nonconformances included and noted?

15.4 Was transcription checked?

5.2 Are all required forms filled out?

No N/A

5.3 Was the correct methodology used?

No N/A Yeş No N/A

Yes No N/A

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

5.6 Are worksheet entries complete and correct?

6.0 Comments on any No response:

First Level Review

QAS RADCALCv4.8.26 STL RICHLAND

STL Richland

1 anderson

Date

Page 1



QC Batch Number:	6345294
	WO.5073

Review Item	Yes (√)	No (V)	N/A (√)
A. Sample Analysis		1	1===(,)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			<del></del>
Detection Limit?	1		
3. Are the correct isotopes reported?			<u> </u>
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			1
3. Is the blank result < the Contract Detection Limit?	~		
4. Is the blank result > the Contract Detection Limit but the sample		İ	
esult < the Contract Detection Limit?			
o. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			<del> </del>
Limit?		·	
B. Do the MS/MSD results and yields meet acceptance criteria?			
2. Do the duplicate sample results and yields meet acceptance	V-01		<del>                                     </del>
riteria?			
C. Other			<del> </del>
. Are all Nonconformances included and noted?			
. Are all required forms filled out?			<del>                                     </del>
. Was the correct methodology used?			
. Was transcription checked?			<del> </del>
. Were all calculations checked at a minimum frequency?			
. Were units checked?			
Comments on any "No" response:			
	**************************************		Ale I an ale and a second second
Second Level Review Mesryl (2 (Clam		Date: _/	- 10-11

LS-038B, Rev. 10, 8/02

SEVERN SEPARATE STL

# Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/16/2007 5:11:05 PM

Lot No., Due Date:

J6L020191; 01/22/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6345299; RGAMMA Gamma by GER

SDG, Matrix:

W05073; WATER

1.0 COC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yeş No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

¥ Yeşr No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

❤ Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

es No N/A

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units?

es No N/A

4.2 Were analysis volumes entered correctly?

Yes No N/A

4.3 Were Yields entered correctly?

Yes No N/A Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements?

¥ Yeş No N/A

4.5 Were raw counts reviewed for anomalies?

**V** 

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

5.2 Are all required forms filled out?

Yeş No N/A

5.3 Was the correct methodology used?

y eş∕NoN/A

5.4 Was transcription checked?

y No N/A

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

5.6 Are worksheet entries complete and correct?

Yes No N/A

6.0 Comments on any No response:

First Level Review

STL Richland QAS\_RADCALCv4.8.26 STL\_RICHLAND Date /-/7-67



1. Are all Nonconformances included and noted?

5. Were all calculations checked at a minimum frequency?

2. Are all required forms filled out?3. Was the correct methodology used?4. Was transcription checked?

Comments on any "No" response:

6. Were units checked?

OC Batch Number:

# Data Review Checklist RADIOCHEMISTRY Second Level Review

W 2013			
Review Item	Yes (√)	No (1)	N/A (\(\frac{1}{2}\))
A. Sample Analysis	1 200 (1)	110(1)	107(1)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	<del>                                     </del>	<del> </del>	<del></del>
Detection Limit?			
3. Are the correct isotopes reported?	1		
B. QC Samples	1		-
<ol> <li>Is the Minimum Detectable Activity for the blank result ≤ the</li> </ol>			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			<del> </del>
3. Is the blank result < the Contract Detection Limit?			-
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?		<del> </del> -	
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection	<del>                                     </del>		-
Limit?		ļ	
8. Do the MS/MSD results and yields meet acceptance criteria?	1		+
9. Do the duplicate sample results and yields meet acceptance	<u> </u>		+
criteria?			
C. Other	<u> </u>	<del></del>	<del> </del>

	,
Second Level Review Phys. of A	

	SEVERN		1/16/2007 5:1	1-34	
		RADIOCHEMISTRY, First Level Review	771072007 3.1	1.0	7 I IV
]	_ot No., Due		, , , , , , , , , , , , , , , , , , ,	OCCUPANT.	turbus schrodersera
- [	Client, Site:				
- 1		No., Method Test: 6345301; RGAMMA Gamma by GER			
5	SDG, Matrix:	x: W05073; WATER			
	.0 COC .1 is the ICOC	OC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	.0 QC Batch .1 Do the Sun	<b>ch</b> ummary/Detailed Reports include a calculated result for each sample listed on the QC Batch S	Sheet? Yes	No	N/A
2	.2 Are the QC	C appropriate for the analysis included in the batch?	Yeş	No	N/A
2	.3 Is the Analy	alytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
		Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	.0 QC & San 1 Is the blank	amples nk results, yield, and MDA within contract limits?	Yes	No	N/A
3.	2 Is the LCS	S result, yield, and MDA within contract limits?	Yes	No	N/A
		IS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.	4 Are the dup	uplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
		ample yields and MDAs within contract limits?	Yes	No	N/A
4.	O Raw Data 1 Were result	ta ults calculated in the correct units?	Yes	No	N/A
4.:	2 Were analys	lysis volumes entered correctly?	Yeş	No	N/A
4.3	3 Were Yields	ds entered correctly?	Yes	No	N/A
4.4	4 Were specti	ctra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw co	counts reviewed for anomalies?	Yea	No	N/A
	Other Are all nonce	aconformances included and noted?	Yes	No	N/A
5.2	Are all requi	uired forms filled out?	Yeş	No	V N/A
5.3	Was the cor	orrect methodology used?	Yes		
5.4	Was transcri	cription checked?	Yes	No	N/A
5.5	Were all cald	alculations checked at a minimum frequency?	Yes I	No	N/A
5.6	Are workshe	neet entries complete and correct?	Yes 1	No	N/A
6.0	Comments o	on any No response:  WH 109 (C)201  10-09 268	*		
Fir	st Level Rev	eview Pan Qualizan Date 1-1-	フ・ジーフ		

QAS\_RADCALCv4.8.26 STL RICHLAND

STL Richland

Page 1



QC Batch Number:	6245301
	W05013 .

Review Item	Yes (√)	$No(\sqrt{)}$	NI/A Colly
A. Sample Analysis	1 203 ( 7 )	110(1)	$N/A(\sqrt{)}$
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	<del>                                     </del>		
Detection Limit?			.
3. Are the correct isotopes reported?			
B. QC Samples		+	
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?	1-7-		
3. Is the blank result < the Contract Detection Limit?		<del></del>	<del>-</del>
4. Is the blank result > the Contract Detection Limit but the sample		+	<del>-  </del>
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
1. Is the LCS Minimum Detectable Activity < the Contract Detection			<del></del>
Limit?		-	
8. Do the MS/MSD results and yields meet acceptance criteria?			1
9. Do the duplicate sample results and yields meet acceptance			
criteria?			ļ
C. Other		<u> </u>	<del> </del>
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			<del>                                     </del>
3. Was the correct methodology used?			
4. Was transcription checked?			+
5. Were all calculations checked at a minimum frequency?			<del>                                     </del>
6. Were units checked?			
Comments on any "No" response: See UCM			-
	<del></del>	3	
		,	
			·······························
	/ "		
Second Level Review: Wells 4 (1)		_	1-17-

# Clouseau Nonconformance Memo



NCM #: 10-09288

NCM Initiated By: Pam Anderson

Date Opened: 01/17/2007

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Prep

Tests: Gamma by GER

Lot #'s (Sample #'s): J6L080130 (1).

QC Batches: 6345301

Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)

### Problem Description / Root Cause

Name Pam Anderson Date Description

01/17/2007

There was insufficient sample for a duplicate in this gamma in water batch. A sample

was recounted on a different detector to have a replicate.

# **Corrective Action**

Name Pam Anderson Date

**Corrective Action** 

01/17/2007 NA

# **Client Notification Summary**

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

#### Quality Assurance Verification

Verified By

**Due Date** 

Status

<u>Notes</u>

This section not yet completed by QA.

### Approval History

**Date Approved** 

Approved By

Position

Date Printed: 1/17/2007

STL

# Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/19/2007 11:53:34 AM

Lot No., Due Date:

J6L080235,J6L020186,J6L020191,J6L060370; 01/22/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6345293; RGAMLEPS Gamma by LEPS

SDG, Matrix:

W05073; WATER

11	Λ	^	$\sim$	$\sim$
1.1	U	۰	v	С

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

#### 2.0 QC Batch

- 2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?
- 2.2 Are the QC appropriate for the analysis included in the batch?
- 2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?
- 2.4 Does the Worksheets include a Tracer Vial label for each sample?

#### 3.0 QC & Samples

- 3.1 Is the blank results, yield, and MDA within contract limits?
- 3.2 Is the LCS result, yield, and MDA within contract limits?
- 3.3 Are the MS/MSD results, yields, and MDA within contract limits?
- 3.4 Are the duplicate result, yields, and MDAs within contract limits?
- 3.5 Are the sample yields and MDAs within contract limits?

#### 4.0 Raw Data

- 4.1 Were results calculated in the correct units?
- 4.2 Were analysis volumes entered correctly?
- 4.3 Were Yields entered correctly?
- 4.4 Were spectra reviewed/meet contractual requirements?
- 4.5 Were raw counts reviewed for anomalies?

#### 5.0 Other

- 5.1 Are all nonconformances included and noted?
- 5.2 Are all required forms filled out?
- 5.3 Was the correct methodology used?
- 5.4 Was transcription checked?
- 5.5 Were all calculations checked at a minimum frequency?
- 5.6 Are worksheet entries complete and correct?
- 6.0 Comments on any No response.

Yeş No N/A

Yes No N/A

Yes No N/A

Yes No N/A

Yes No N/A

Yes No N/A
Yes No N/A

Yes No N/A

Yes No N/A

Yeş No N/A Yeş No N/A

Yes No N/A

Yes No N/A Yes No N/A

Yes No N/A Yes No N/A

Yes No N/A

Yes No N/A

Yes No N/A

Yes No N/A

First Level Review

QAS\_RADCALCV4.8.26 STL RICHLAND

STL Richland

am ancierson

Date 1-19-67

Page 1

age



OC Batch Number:	6345293
•	W 05073

A. Sample Analysis  1. Are the sample yields within acceptance criteria?	Yes (V)	$No(\checkmark)$	$N/A(\sqrt{)}$
1. Are the sample yields within acceptance criteria?		1 (")	1 2 7 2 2 ( )
2. Is the sample Minimum Detectable Activity < the Contract		1	
Detection Limit?			
3. Are the correct isotopes reported?	1 /-		
B. QC Samples		<del></del>	
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?	1 //		
3. Is the blank result < the Contract Detection Limit?	1		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?	1		
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance		10000	
criteria?			
C. Other			
. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			·

LS-038B, Rev. 10, 8/02

Data Review/Verification Checklist SEVERN STL 1/12/2007 2:40:28 PM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6L020191, J6L060373: 01/22/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6345303; RTC99 Tc-99 by LSC SDG, Matrix: W05073; WATER 8.0 Correction Calculation Protocol Used. Yeş No N/A OK 8.01 The Appropriate Methods Were Used To Analyze the Samples Yeş No N/A 8.02 Final Results Are in the Appropriate Activity Units Yeş No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yeşr No N/A 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yes No,∕N/A Incorrect Tracer/Vial => JKX0E1AF TCSG<>TCSE Q:V9 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample No N/A Yes 8.06 At Least the Minimum Sample Volume Was Used Yeş No N/A 8.07 The Correct Count Geometry was Used. Yeş No N/A 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yeş No N/A 8.09 Method Blank is within Control Limits. No N/A 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. YeşrNoN/A OK (RPD) 8.14 LCS within Control Limits. Yeş No N/A 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yeş No N/A OK 8.17 Tracer within Control Limits. Yes No N/A No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! 8.19 Sample Specific MDC <= CRDL. YeşrNoN/A OK 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag.</p> Yes No N/Ax No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag No N/A No Positive Results OK Calc\_IDL Not Calculated 8.23 Result <= Action Level, when Defined. No N/A OK; No Action Level Found => TC-99 OK; No Callin Level Found => TC-99 8.24 Result + 3s >=0, Not Too Negative. No N/A OK 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data! STL Richland Page 1 QAS\_RADCALCv4.8.26

STL RICHLAND

8 0

8.26 Instruments have Current Calibrations.

Yes No N/A

8.27 Correct Count Library Used.
No Count Library found in Batch Data!

8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version No N/A

8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later version N/A

8.3 Comments:

8.31 Results Blank Subtracted as Appropriate.
OK

First Level Review \_

Law anderson

Date 1-12-87

STL Richland

OAS\_BADCALCV4.8.26

STL RICHLAND



Review Item	Yes (√)	No (V)	N/A (√)
A. Sample Analysis	1(1)	110(1)	11/21(1)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	<del>                                     </del>		
Detection Limit?			
3. Are the correct isotopes reported?		<del> </del>	
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			1
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria? 9. Do the duplicate sample results and yields meet acceptance			
criteria?		1	
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			ļ
-			
Comments on any "No" response:			
	**************************************		
			•

Data Review/Verification Checklist SEVERN STL 1/9/2007 4:51:20 PM The second second RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6L080158,J6L020189,J6L020191,J6L060376,J6L060373,J6L060370; 01/22/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6345297; RTRITIUM H-3 by LSC SDG, Matrix: W05073: WATER 8.0 Correction Calculation Protocol Used. No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples No N/A Yeş∉ 8.02 Final Results Are in the Appropriate Activity Units Yes No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yeş No N/A The Correct Tracer and QC Vials Where Used in the Samples 8.04 No N/A Yeş 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yeş No N/A 8.06 At Least the Minimum Sample Volume Was Used Yes Nov N/A Analysis Volume => JKPLL1AA 5.00<10.00 JKPLT1AA 5.00<10.00 JKXXH1AA 5.00<10.00 JKX0E1AA 5.00<10.00 JKX061AA 5.00<10.00 JKX071AA 5.00<10.00 JK30K1AA 5.00<10.00 Q:VB 8.07 The Correct Count Geometry was Used. Yes Nov N/A Count Geometry => JK7161AF SVP15/5<>SVP10/10 JK7161AG SVP15/5<>SVP10/10 JK7161AA SVP15/5<>SVP10/10 JK7161AC SVP15/5<>SVP10/10 JKPLL1AA SVP15/5<>SVP10/10 JKPLT1AA SVP15/5<>SVP10/10 JKXXH1AA SVP15/5<>SVP10/10 JKX0E1AA SVP15/5<>SVP10/10 JKX061AA SVP15/5<>SVP10/10 JKX061AC SVP15/5<>SVP10/10 JKX071AA SVP15/5<>SVP10/10 JK30K1AA SVP15/5<>SVP10/10 JK7161AH SVP15/5<>SVP10/10 JK7161AD SVP15/5<>SVP10/10 JK7161AE SVP15/5<>SVP10/10 Q:VC 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yeş No N/A 8.09 Method Blank is within Control Limits No N/A OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary).</p> No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yeş No N/A OK (RPD) 8.14 LCS within Control Limits. No N/A Yes OK 8.15 MLCS within Control Limits. No N/A Yeş OK 8.16 MS within Control Limits. Yes No N/A No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. Yes No N/Ax No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! STL Richland Page 1

QAS\_RADCALCv4.8.26 STL\_RICHLAND

.19	Sample Specific MDC <= CRDL.  OK	Yes	No	N/
.2 (	Comments:	<b>V</b>		
	Result < Lc, Activity Not Detected, U Flag.	Yes	No	N/
	No Limit Specified! Result < Mdc, Activity Not Detected, U Flag.			V
	No Positive Results	Yes	No	N/
	OK Calc_IDL Not Calculated	A		
.23	Result <= Action Level, when Defined.	Yes	No	N/
	OK; No Action Level Found => H-3	V		
	OK; No Callin Level Found => H-3			
24	Result + 3s >=0, Not Too Negative.	Yeş	Nο	N/
	ОК	V		1417
	Counting Spectrum are within FWHM Limits.	Yes	No	N/a
	No FWHM found in Batch Data!			V
20	Instruments have Current Calibrations.	Yes	No	N/
27	Correct Count Library Used.	Yes	No	NI/
ſ	No Count Library found in Batch Data!			h./
28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version	risès	No	N/A
29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	<b>Vees</b> io	nNeò.	N/A
3 C	comments:			
3 †	Results Blank Subtracted as Appropriate.	Yes	No	N/A
	OK	V	,,,	,.
		•		
		4.		

First Level Review

STL Richland



OC Batch Number:

Data Review Checklist RADIOCHEMISTRY Second Level Review

) No (√)	N/A (√
1	
-	. [
<del>-  </del>	
	• •
	<del>-  </del>
_	
	<del></del>

LS-038B, Rev. 10, 8/02

Data Review/Verification Checklist SEVERN SIL 1/18/2007 11:03:38 AM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6L020191; 01/22/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6345304; RUNAT UNat by KPA SDG, Matrix: W05073: WATER 18.0 Correction Calculation Protocol Used. No N/A Yeş 8.01 The Appropriate Methods Were Used To Analyze the Samples No N/A 8.02 Final Results Are in the Appropriate Activity Units No N/A Yes 8.03 Batch Contains the Required QC Appropriate for the Method No N/A Yes 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yes Nov N/A Incorrect Tracer/Vial => JK72M1AD UNSC<>UNSF Q:V9 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yeş No N/A 8.06 At Least the Minimum Sample Volume Was Used Yes No N/A No Count Analysis Size found in Batch Data! 8.07 The Correct Count Geometry was Used. Yes No N/A No Count Geometry found in Batch Data! 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yes No N/A No Count Duration Field Found in Batch Data! 8.09 Method Blank is within Control Limits Yes No N/A QΚ 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). No N/A Yeşr OK 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yeşr No N/A OK (RPD) 8.14 LCS within Control Limits. Yes No N/A 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits No N/A Yes OK 8.17 Tracer within Control Limits. Yes No N/A No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! 8.19 Sample Specific MDC <= CRDL. No N/A Yes OK 8.2 Comments: |8.21 Result < Lc, Activity Not Detected, U Flag.</p> Yes No N/Ay No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag Yes Nov N/A Batch Positive Result => JKPLR1AC Uranium 5.4E+00 L:8.2E-02 JKPLT1AF Uranium 1.7E+01 L:8.3E-02 8.23 Result <= Action Level, when Defined. No N/A OK; No Action Level Found => Uranium OK; No Callin Level Found => Uranium 8.24 Result + 3s >=0, Not Too Negative. Yes Noy N/A Result + 3s < 0 JK72M1AA Uranium -7.0E-03 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data! STL Richland Page 1 OAS RADCALCv4.8.26

STL RICHLAND

8.26 Instruments have Current Calibrations.	Yes	No	N/A
No Count Library found in Batch Data!	Yes		V
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version			
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	<b>∕téesi</b> o	nNe).	N/A
8.3 Comments:			
8.31 Results Blank Subtracted as Appropriate.  OK	Yes	No	N/A
First Level Review Pan Candleson Date 1-18.01			
First Level Review am Cluderson Date 1-18:07			

OAS\_RADCALCV4.8.26 STL RICHLAND Page 2



# Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	6345504
	W05073

Review Item	Yes (V)	No (V)	N/A (V)
A. Sample Analysis			1 2 2 2 7
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			1
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			1
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?		<del> </del>	1
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other		1	<del></del>
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?		<u> </u>	1
3. Was the correct methodology used?			<del>                                     </del>
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			•
6. Were units checked?			·

Comments on any "No" res	ponse:				
					_
- And the second of the second					
Second Level Review.	Herryl A	alden.	 Date:	18-07	

SIVER STL

### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/22/2007 9:25:48 AM

Lot No., Due Date:

J6L080160,J6L060355; 01/22/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6345295;

SDG. Matrix:

W05073; WATER

SDG, Matrix:	W05073; WATER			
1.0 COC 1.1 Is the ICOC page	complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yea	No	N/A
<b>2.0 QC Batch</b> 2.1 Do the Summary/[	Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2 Are the QC approp	oriate for the analysis included in the batch?	Yes	No	N/A
2.3 Is the Analytical Ba	atch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4 Does the Workshe	ets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0 QC & Samples 3.1 Is the blank results	s, yield, and MDA within contract limits?	Yes	No	N/A
3.2 Is the LCS result,	yield, and MDA within contract limits?	Yes	No	N/A
3.3 Are the MS/MSD r	esults, yields, and MDA within contract limits?	Yes	No	N/A
3.4 Are the duplicate r	esult, yields, and MDAs within contract limits?	Yes	No	N/A
3.5 Are the sample yie	elds and MDAs within contract limits?	Yes	No	N/A
<b>4.0 Raw Data</b> 4.1 Were results calcu	alated in the correct units?	Yes	No	N/A
4.2 Were analysis volu	umes entered correctly?	Yes	No	N/A
4.3 Were Yields enter	ed correctly?	Yes	No	N/A
4.4 Were spectra revi	ewed/meet contractual requirements?	Yes	No	NA
4.5 Were raw counts i	reviewed for anomalies?	Yes	No	N/A
<b>5.0 Other</b> 5.1 Are all nonconform	nances included and noted?	Yes	No	N/A
5.2 Are all required for	ms filled out?	Yes	No	N/A
5.3 Was the correct m	ethodology used?	Yea	No	N/A
5.4 Was transcription	checked?	Yes	No	N/A
5.5. Were all calculation	ons checked at a minimum frequency?	Yea	No	N/A
5.6 Are worksheet ent	ries complete and correct?	Yes	No	N/A
6.0 Comments on any	No response:	•		

First Level Review

Pam and cason

Date 1-22.07

1/22/2007 12:00:31 PM

Lot No., Due Date:

J6L080160; 01/22/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7022272;

SDG, Matrix:

W05073; WATER

Sr	G, Matrix:	WUDU/3; WATER			
1.0	COC Is the ICOC page complete; in	ncludes all applicable analysis, dates, SOP numbers, and revisions?	Yea	No	N/A
<b>2.0</b> 2.1	QC Batch Do the Summary/Detailed Re	ports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the	e analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Works	sheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include	e a Tracer Vial label for each sample?	Yes	No	N/A
<b>3.0</b> 3.1	QC & Samples Is the blank results, yield, and	d MDA within contract limits?	Yeş	No	N/A
3.2	Is the LCS result, yield, and M	MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yield	ds, and MDA within contract limits?	Yes	No	NA
3.4	Are the duplicate result, yields	s, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MD	DAs within contract limits?	Yes	No	N/A
	Raw Data Were results calculated in the	e correct units?	Yes	No	N/A
4.2	Were analysis volumes enter	ed correctly?	Yes	No	N/A
4.3	Were Yields entered correctly	<i>y</i> ?	Yes	No	NA
4.4	Were spectra reviewed/meet	contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for	r anomalies?	Yea	No	N/A
	Other Are all nonconformances inclu	uded and noted?	Yes	No	N/A
5.2	Are all required forms filled ou	ut?	Yes	No	N/A
5.3	Was the correct methodology	vused?	Yea	No	N/A
5.4	Was transcription checked?		Yes	No	N/A
5.5	Were all calculations checked	d at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries comple	ete and correct?	Yea	No	N/A
6.0	Comments on any No respon-	ise:	<b>*</b>		

First Level Review

Jam Undersu

Date  $\sqrt{-22.07}$ 

STL Richland

Page 1

)	(2) (2)	8/0									C.O.C.#			
PNNLUG Z	10050	73		•	CHAIN	OF	CUSTODY/S	SAMPLE ANALYS	SIS REQU	EST		I07-009-	61	
Du	e CI 15	7-0	7								Pa	ge <u>l</u> of <u>l</u>		
Collector	Fluor Han				C	Dot Stewa				Telephone No. MSIN FAX 509-376-5056				
SAF No.	K.B.HUL	SE-			s	ampling O	rigin			Order/Chai	rge Code		$\neg$	
107-009 Project Title						Hanford S	***************************************	A.C. 1	Ice Ches	No.	Temp.			
2UP1-LOL NOVI	EMBER 2006					Aethod of S	7	<u> </u>	Bill of Lading/Air Bill No.					
Severn Trent Inco	prograted Ricl	nland		***************************************		Govt. Vel								
Protocol SURV				-			Prio	rity: 45 Days	Offsite P	roperty No.				
POSSIBLE SAMP  ** ** Contains Rad releasable per DOE Ore	ioactive Materia	l at cor	centrations that	are not regulate	ed for transpor	tation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PN closure of 14 days. WSCF: Batch all PNNL GW samples			S, and W 07 SAFs into	mption: Yes 🗹 N one SDG, not to exceed	SDG	
Sample No.	Lab ID	*	Date	Time	No/Type (	Container		Sample Ana	lysis			Preservative		
B1L204		W	12-1-06	1/37	1x20-mL	Р	Activity Scan	A Property of the Control of the Con		Non	ie	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
B1L204		W	4	1137	2x4000-m	IL G/P	I129LL_SEP_LEP	S_GS_LL: I-129 (1)		Non	ie			
		<u> </u>							<i>X</i> 13			to Annual Control		
		-		<b> </b>				JK	PK3		· · · · · · · · · · · · · · · · · · ·			
	<b>-</b>	-		<u> </u>				A STATE OF THE STA						
		<del>                                     </del>						-						
		<del> </del>							THE STATE OF THE S					
		1												
		<u> </u>												
		_		<u> </u>										
		<del> </del>		<del> </del>										
		-	<u> </u>											
	<u> </u>	<u> </u>	L.,	<u></u>	<u> </u>	2016	5 0			L				
Relinquished By	Print Fluor Han K. B. HUL	ford	Sign	Les DE		2006	Received By Anits	5. Smilk	DEC 0 1		S = Soil SE = Sedimen	Matrix *  DS = Dn t DL = Dn		
Relinquished By					Date/T	ine	Received By		D	ate/Time	SO = Solid SL = Sludge W = Water	T = Tis WI = Wit I. = Lio	ine	
Relinquished By					Date/T	ime	Received By		D	ate/Time	O = Oil A = Air	V = Ve X = Oft	getation her	
Relinquished By					Date/I	ime	Received By		D	ate/Time				
FINAL SAMPL DISPOSITION		Metho	l (e.g., Return to	customer, per	lab procedure	, used in proc	ess)	Disposed By			D	ate/Time		

PNNL 161 020186 1005073 Due 01.15.07	СНА	IN OF C	CUSTODY/S	SAMPLE ANALYSIS	REQUEST		I07-009-2
Aug 01.15.07							Page <u>l</u> of <u>l</u>
onector		Contact/Req			Telephone No. _509-376-5056	MSIN	FAX
AF No. F. M. HALL		Dot Stewar Sampling Or	rigin	AND THE COLUMN TWO IS NOT THE COLUMN TWO IS	Purchase Order/0		
roject Title		Hanford S	F-N-5763		Ice Chest No.	1-26	Temp.
2UP1-LOL NOVEMBER 2006 hinned To (Lab)		Method of S	hipment		Bill of Lading/Air	r Bill No.	
Severn Trent Incorporated, Richland	ON THE PROPERTY OF THE PROPERT	Govt. Veh		74 45 Davis	Offsite Property	No.	
SURV POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentration eleasable per DOE Order 5400.5 (1990/1993)	S is that are not regulated for trans	portation per 49 (		rity: 45 Days  SPECIAL INSTRUCTIONS Ho All Labs except WSCF: Batch all PNNL sam closure of 14 days.  WSCF: Batch all PNNL GW samples submit		G, I, S, and W 07 S.	vity Exemption: Yes No No AFs into one SDG, not to exceed SDG
Sample No. Lab ID * Dat	e Time No/Tyr	e Container	A STORY	Sample Analysis			Preservative
B1L1T6 W /2-/-			Activity Scan			None	The state of the s
B1L1T6 W 1		)-mL G/P	I129LL_SEP_LEP	S_GS_LL: I-129 (1)		None	
							and the second s
				JKPK	(0)		
			- done the second				
							A Library Control of the Control of
		····					
Relinquished By Print	Sign Da	ite/Time / 50°	Received By	A Print Sign	Date/Time	1503	Matrix *
Fluor Hanford F.M. HALL	DEC !	1 2006	Received By		DEC 0 1 20	<u>U6</u> s = SE =	Soil DS = Drim Solid Sediment DL = Drim Liqui
Relinquished By		ate/Time				SI. = W =	= Solid
Relinquished By	Da	ite/Time	Received By		Date/Time		Oil V = Vegetation Air X = Other
Relinquished By	Di	ate/Time	Received By		Date/Time		
FINAL SAMPLE Disposal Method (e.g., R DISPOSITION	eturn to customer, per lab proce	dure, used in proc	cess)	Disposed By			Date/Time



#### Sample Check-in List

Date/Tir	me Received:/	2.1.06 1503 SDG#: WOS				
Client:_	Pow	SDG #: 600 S	7073 NA[] S	SAF#: <u>Z</u> C	7-009	NA[]
Work O	rder Number: <u> </u>	1.020186	Chain of Custody	# <u>To7</u>	009 2,6	<u>/</u>
Shippin	g Container ID: <u>RC</u>	SS SML 26	Air Bill # _ <i>&amp;</i> J	н		·•·
1.	Custody Seals on	shipping container intac	t?	NA[]	Yes [/ No []	
2.	Custody Seals da	ted and signed?		NA[]	Yes [/ No [ ]	
3.	Chain of Custody	record present?		•	Yes[/ No[]	
4.		re:NA [/]		g materials	is NA [] We	t [ ] Dry [ ]
6.	Number of sampl	es in shipping container;	7			
7.	Sample holding to			NA[/]	Yes[] No[]	
8.	Samples have:tapecustody sea	als .	<del></del>	zard labels propriate sa	mples labels	
9.	Samples are:in good corbroken	ndition	hav	king ve air bubbl samples re	les equiring head	space)
10.	Sample pH taken	? NA[] pH	<2[] pH>2/	pH>9[]		
11.		Sample Collector Listed on only. No corrective a			Yes / No [	]
12.	Were any anomal	ies identified in sample r	eccipt?		Yes[] Nox	·]
13.	Description of an	omalies (include sample	numbers):			
Sample	Custodian:	S. Smith	Date:	2.1.06	15:0	3
Clie	nt Sample ID	Analysis Requested	Condition		Comments	/Action
Client In	formed on	.by	Person cor	ntacted	1	
[] No a	action necessary; pro	ocess as is.				
Ρτοјесι Ν	lanager		Date	nden dass manadad ona estadolore salado altres manada		
LS-023,	9/03, Rev. 5					

STL RICHLAND

PNNL 16	1020	189	7		CHAI	N OF	CUSTODY/	SAMPLE ANALY	SIS REQUES	ſ	C.0	.C.#	07-002-166		
Collectonuor Han	tord		<u>/l</u>		Į,	Contact/Re	eauester	The same of the sa	Telephone No.		MSIN	FA			
SAF No.	NG		·			Dot Stev	Dot Stewart 509-376-5056								
SAF No. 107-002					ľ		mpling Origin Purchase Order/Charge Code Hanford Site					Ī			
Project Title				AHM			MNF-N	- COK. U	Ice Chest No.	-11: IS-	114-1	emp.			
100KR4IAM(1/ Shinned To (Lah)		BER 2	006			Method of		300 7	Bill of Lading/		77				
Severn Trent Inc		hland				Govt. Ve			Bill Of Cauling	AIT DIII NO.					
Protocol CERCLA							Pric	ority: 45 Days	Offsite Propert	v No.					
POSSIBLE SAMI  ** Contains Ra releasable per DOE O	dioactive Materia	al at con	centrations that	t are not regula	ited for transpo	rtation per 49	CFR but are not	SPECIAL INSTRUCTIONS Batch all PNNL GW samples submit 14 days. Submit invoices & deliverables to Di					on: Yes 🗹 No 🗀		
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sample Ana	ilveis				Preservative		
B1KLX1	(2010)	w	12-1-06	1127	1x1000-n		9310 ALPHARET	A_GPC: Alpha + Beta (2)	ayara	HNO3 to	nH <2		1 TCSCI VALIVE		
B1KLX1	<del>                                     </del>	w	12-1-00	1001	1x20-mL		Activity Scan	7 _ O		None	pii 2				
B1KLX1	_	W		+ + +	3x1000-n		GAMMA_GS: List	-1 (10)		HNO3 to pH <2					
B1KLX1	+	W		+	3x1000-n			ECIP_GPC: Sr-90 (1)		HNO3 to					
B1KLX1		W		+	1x1000-r		906.0_H3_LSC: T			None					
BINDO		+''-	¥	Y	121000-1	····	300.0_110_E00.1	(tauti (1)	Y	None	TIC .				
								テベル	277-		***************************************				
	<u> </u>	-		-	<del> </del>		<u> </u>								
		1			<del> </del>	<u> </u>					~~~				
	<b>-</b>	1													
		1								<b>—</b>		27			
		1		1							***************************************	***************************************			
	1			1						1					
		<del>                                     </del>	<b> </b>	<b></b>	1					1	· · · · · · · · · · · · · · · · · · ·				
		_			1										
		J	1			~ ~~	1 / 2	,		1003		***************************************			
Relin <b>fisherd te</b> info			Sign	DEC 0 1	2006		Received By	Print Sm 44_DE	······		S = So SE = Sec	1	DS = Drum Solid		
				Date/		Received By		Date/Time		SO = So SL = Sh	= Sediment DI. = Drim Lioni = Solid T = Tissue = Shudge WI = Wine = Water I. = Lionid = Oil V = Vegetation				
, companies by					Date		1.0001.000		Date: Fills		A = Ai		X = Other		
Relinquished By					Date/	Гime	Received By	The second secon	Date/Time	<b></b>					
FINAL SAMPI DISPOSITION		Method	l (e.g., Return t	o customer, pe	r lab procedure	, used in pro-	cess)	Disposed By				Date/Ti	me		

ate/Time	Received: 13.0	51.04 15:03 SDG#:_W0507:	7	77-002
			2_NA[] SAF#:	NA()
Vork Orde	r Number: <u>U</u>		in of Custody # _7 07	
hipping C	Container ID: <u>51</u>	9w5-115 Air	Bill# N/A	
		hipping container intact?		Yes [X No []
., C	ustody Seals date	ed and signed?	NA[]	Yes [ No [ ]
s, C	Chain of Custody	record present?		Yes ( No. )
). C	Cooler températur	e:NA 🖒 5.Vern	niculite/packing material	s is NA [] Wet [] Dry []
		es in shipping container:	/	
	Sample holding ti			Yes ( ) No [ ]
8. S	Samples have:tapecustody sea		hazard labe	ls samples labels
يـ	Samples are:in good corbroken	ndition	leaking have air but (Only for samples	bbles requiring head space)
10.	Sample pH taken	? NA[] pH<2[/	} pH>2// pH>9[	7. 1
11.	Sample Location *For documentat	, Sample Collector Listed? * ion only. No corrective action	needed.	Yes / No[]
12	Were any anoma	lies identified in sample receip	ot?	Yes[] No 🛭
13.	Description of ar	nomaties (include sample num	bers): N/A	
Sample (	Custodian	S. Smith	Date: 12.01	06 15:03
	nt Sample ID	Analysis Requested	Condition	Comments/Action
Cite	in Jampie 10			
		by	Person contacted	
	action necessary; p		Tiste	
Project N	Manager		Day -	Application and the second sec

PNNL JC	00050 00050	191 23 5.0	7		CHAIN OF	CUSTODY	SAMPLE ANALYS	IS REQUEST		S07-010-229
Collectuor Hantord	<del></del>				Contact/F	Reauester		Telephone No.	MSIN	Page 1 of 1 FAX
SAF No.					Dot Ste Sampling			509-376-5056		raa
S07-010 Project Title					Hanfor			Purchase Order		
SURV OCTOB	ER 2006					HNF-N-5	06.4	Ice Chest No.	HW5-115 Tem	D.
Shinned To (Lah) Severn Trent Inc		hland	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	***************************************		f Shipment		Bill of Lading/A		
Protocol	<u></u>	mann.	***************************************	<del>14 1 1 1 1 1 1 1</del>	Govt. V		ovitus 45 Dove	Offsite Property	No.	
SURV POSSIBLE SAMP	LE HAZARI	S/RE	MARKS				ority: 45 Days SPECIAL INSTRUCTIONS			
** ** Contains Rad relcasable per DOE On	dioactive Materia	l at con	centrations that	t are not regula	ated for transportation per 4	49 CFR but are not	All Labs except WSCF: Batch all PNNi SDG closure of 14 days. Submit invoices & deliverables to DL St		10tal Activity Ex der A, G, I, S, and W 07 SAF:	s into one SDG, not to exceed
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analys	is		Preservative
B1KR25		W	12.106	2959	1x1000-mL P	906.0_H3_LSC: 1			None	Freservative
B1KR25		w	1	111	1x20-mL P	Activity Scan			None	
B1KR25		W			1x500-mL P	TC99_ETVDSK_I	LSC: Tc-99 (1)	**************************************	HCl to pH <2	
B1KR25		W			1x500-mL G/P	UTOT_KPA: Urar	nium (1)		HNO3 to pH <2	
B1KR25		W			1x4000-mL G/P	GAMMALL_GS: L	_ist-1 (9)	HNO3 to pH <2		
B1KR25		W		1	2x4000-mL G/P	I129LL_SEP_LEF	PS_GS_LL: I-129 (1)	· · · · · · · · · · · · · · · · · · ·	None	The state of the s
	<u> </u>									· · · · · · · · · · · · · · · · · · ·
	<del>                                     </del>			<b></b>			<b>サイ</b>	PLT		
· · · · · · · · · · · · · · · · · · ·	ļ	ļ		<u> </u>						
	<del> </del>	$\vdash$		<u> </u>						
	-	$\vdash$				· · · · · · · · · · · · · · · · · · ·				
	<del> </del>			<del></del>			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
		<del>  </del>		<del></del>						
	<del> </del>			<del> </del>	ļ			Marie		
,	<del> </del>	$\vdash$		<del> </del>		<u> </u>				···
	<u> </u>		~	<u> L</u>		1				
Relinquished By Fluor Hanford K. J. YOUNG		ر ٥٠٠	Sign	DEC 0	1 2006	Received By Smi	the Sign DEC	0 1 2006		Matrix *
Relinquished By					Date/Time	Received By	,	Date/Time	S = Soil SE = Sedime SO = Solid SI = Sludge W = Water	T = Tissue
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation $X = O$ ther
Relinquished By					Date/Time	Received By		Date/Time		
FINAL SAMPL DISPOSITION		lethod (	(e.g., Return to	customer, per	lab procedure, used in pro	cess)	Disposed By		. I	Date/Time

PNNLJ6	L 020	191			CHAINOE	CHETODY	CAREET E ANIAT VO	e project	1	o.c.# S07-010-111
1	WUSE	ノニノ			CIECULA	COMODIA	SAMPLE ANALYS	IS REQUES	[	20/-010-111
Collectuor Hanto	re	(	/		Contact/R	ampetar	A MARIE CONTRACTOR OF THE CONT	T-1b N-	Mary	Page <u>1</u> of <u>1</u>
SAF No.	3		······································		Dot Stev	vart		Telephone No. 509-376-5056	MSIN	FAX
S07-010					Sampling 6 Hanford			Purchase Order	/Charge Code	
Project Title SURV. OCTOB	FR 2006						N 506-4	Ice Chest No	AW5115	Temp.
Shinned To (Lah) Severn Trent Inc		L1			Method of	Shipment		Bill of Lading/A		, , , , , , , , , , , , , , , , , , ,
Protocol	COLDOLAISO VII	mana		<del></del>	Govt. V		-14 (CD-)	Offsite Property	/ No	
SURV POSSIBLE SAME	PLE HAZARI	S/REM	IARKS	At		Pric	ority: 45 Days	<u></u>		
** ** Contains Ra releasable per DOE O	dioactive Materia	l at conce	entrations that	are not regulat	ted for transportation per 49	9 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNNL SDG closure of 14 days. Subtrut invoices & deliverables to DL Ste		Total Activiture A, G, I, S, and W 07	ty Exemption: Yes V No SAFs into one SDG, not to exceed
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analys	is		Preservative
B1KPW0		W	2-1-06	1127	1x20-mL P	Activity Scan			None	
B1KPW0		W		1	1x500-mL P	TC99_ETVDSK_L	.SC: Tc-99 (1)		HCI to pH <2	>
B1KPW0		W	V	N_	1x500-mL G/P	UTOT_KPA: Uran	ium (1)		HNO3 to pH <2	
			····	<u> </u>						
							JKPL	$\mathcal{L}$		
		$\vdash$		<b>_</b>						
	<del>-</del>	$\vdash$		<del> </del>						, the second second second second second second second second second second second second second second second
	-	$\vdash$	· · · · · · · · · · · · · · · · · · ·	<del> </del>						
	<del>                                     </del>	+-+		<b></b>						
		+		<del></del>						
		f					The state of the s			
		f	3841							
			·							
Dolinavished De					$ \mathcal{N}^2$			1000		
Relinquished By Fluor Hanford K. J. YOUNG	Print	-/ou	Sign	DEC 0 1	Date/Time 500	Received By	45. Sm HEC 0	1 2006 DEST		Matrix *
Relinquished By				<u>/LU U 1</u>	Date/Firme	Received By	the Sign In	Date/Time	SO = So SL = SL	ediment DI. = Drum Liqui plid T = Tissue udge WI = Wine
Relinquished By					Date/Time	Received By		Date/Time	W = W O = Oi A = Ai	il V = Vegetation
Relinquished By					Date/Time	Received By	***************************************	Date/Time		
FINAL SAMPL DISPOSITION		Aethod (e	.g., Return to	customer, per	lab procedure, used in proce	ess)	Disposed By	-		Date/Time



Date/Ti	me Received: /	2.01.06 1503			
Client:_	Pow	SDG #: 100°	5023 NA[	SAF#:	507-010 NA[]
Work C	Order Number: <u> </u>	62620191	Chain of Cust	ody#50:	7-010-111,229
Shippin	g Container ID	SAWS-115	Air Bill #	NIA	)
1.	Custody Seals o	n shipping container intac	t?	NA[]	Yes [/ No []
2.	Custody Seals d	ated and signed?		NA[]	Yes [/ No []
3.	Chain of Custod	y record present?			Yes [] No []
4.	Cooler temperat	ure:NA M	Vermiculite/pac	king material	s is NA [ Wet [ ] Dry [ ]
6.	Number of samp	oles in shipping container:	2		
7.	Sample holding	times exceeded?		NA [/]	Yes[] No[]
8.	Samples have:tapecustody se	als .		hazard labels appropriate s	s samples labels
9.	Samples are:in good cobroken	endition	*****	leaking have air bubl for samples	bles requiring head space)
10.	Sample pH taker	n? NA[] pH-	<2//> <2//> pH>2//	pH>9 [ ]	
11.	Sample Location *For documentat	, Sample Collector Listed' ion only. No corrective a	? * ction needed.		Yes [] No[]
12.	Were any anoma	lies identified in sample re	eceipt?		Yes[] NoX]
13.	Description of an	oomalies (include sample r	numbers);	1/A	
		1			
Sample (	Custodian:	Smith	Date:_/	2.01.06	15:03
Clier	nt Sample ID	Analysis Requested	Condit	ion	Comments/Action
Client Inf	ormed on	by	Person	contacted	,
	ction necessary; pro				- <del></del>
Project M	anager		Date	·	
LS-023. 9.	/03, Rev. 5				

PNNL JG	10201	92	3		CHAIN OF	CUSTODY	/SAMPLE ANALY	SIS REQUES	3	S07-011-362
AL SWOCH	LLE C/·/	50								Page <u>1</u> of <u>1</u>
Collector K. J. YC	DUNG				Contact/R			Telephone No.	MSIN	FAX
SAF No.					Dot Stev			509-376-505 Purchase Orde		
S07-011					Hanford	Site		i ii chase Orde	T/Charge Code	
Proiect Title SURV. NOVEM	IRER 2006					HNEN	1-506-4	Ice Chest No.	-27/15 116	Temp.
Shinned To (Lab)					Method of	Shipment	300	Bill of Lading/	Ala Dill No	
Severn Trent Inc	comorated Ric	hland	~		Goyt. V			Bill of Lauring)	AIF DHI NO.	
Protocol * SURV						Pri	ority: 45 Days	Offsite Propert	y No.	
POSSIBLE SAMI ** ** Contains Ra releasable per DOE O	dioactive Materia	ıl at coı	ncentrations that	t are not regula	ted for transportation per 4!	9 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all P closure of 14 days. WSCF: Batch all PNNL GW sampl		A, G, I, S, and W 07 SAI	tv Exemption: Yes V No Fs into one SDG, not to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample An	alysis		Preservative
B1L3R4		W	12-1-06	1022	1x20-mL P	Activity Scan			None	Trostratio
B1L3R4	***************************************	W	1	J	1x1000-mL P	9310 ALPHABE	TA_GPC: Alpha + Beta (2)		HNO3 to pH <2	
		1	-						1370010 pri 12	
		1					7	KPL6		
		1-		<b> </b>				NFLQ		
	<del> </del>	1				<del> </del>			<u> </u>	
	<del> </del>	┼	l	ļ						
		┼	<u> </u>							
***************************************	<del> </del>	╂		<u> </u>		<b> </b>				
										-
	<u> </u>	<u> </u>								
		<u> </u>								
		<u> </u>								
									1	
	···			I	<u> </u>					
Relinquished By Fluor Ham			Sign	DEC 0	Date/Times 03	Received By	Print C Sign DE	Date/Time	1509	Matrix *
K, J, YOU	VE /	7		DEC (I		1 smit	L S. Smith DE	EC 0 1 2006	S = S	
Relinquished By					Date/Time	Received By		Date/Time	SE = Se SO = Se	ediment DI = Dram Liqui olid T = Tissue
										ludge WI = Wine
Relinquished By					Date/Time	Received By		Date/Time	O = O A = A	ril V = Vegetation
Relinquished By					Date/Time	Received By	Marine and the second s	Date/Time		
FINAL SAMPL DISPOSITION		dethod	(e.g., Return to	customer, per	lab procedure, used in proc	ess)	Disposed By		·	Date/Time

### SAVERN STL

Date/Tir	me Received: /3	2.01.06 1563			
Client:_	Pow	SDG #:_W05	7073 NA[]	SAF#: 5	07-011 NA[]
Work O	rder Number: <u>/</u>	020192	Chain of Custod	ly# 807	7-011-362
Shippin	g Container ID: <i>SF</i>	7W5-115	Air Bill # W	/ <i>p</i>	
1.	Custody Seals on	shipping container intact?		NA[]	Yes [ ] No [ ]
2.	Custody Seals da	ted and signed?			Yes [/ No []
3.	Chain of Custody	record present?		Ÿ.	Yes [/] No []
4.	Cooler températu	re:NA [/] 5.	Vermiculite/pack	ing materials	s is NA [] Wet [] Dry []
6.	Number of sampl	es in shipping container:_			
7.	Sample holding t	mes exceeded?		NA N	Yes [ ] No [ ]
8.	Samples have:tapecustody sea	uls		azard labels	amples labels
9.	Samples are:in good corbroken	ndition	t	eaking nave air bubb or samples r	oles equiring head space)
10.	Sample pH taken	? NA[] pH<	2/1 pH>2[]	pH>9[]	
11.		Sample Collector Listed? on only. No corrective ac			Yes [/] No []
12.	Were any anomal	ies identified in sample re	ceipt?		Yes [] No //
13.	Description of an	omalies (înclude sample n	umbers): V	/D	
Sample	Custodian:	S. Smith	Date:	12.61	06 15:63
Clie	nt Sample ID	Analysis Requested	Conditi	on	Comments/Action
Client In	formed on	by	Person	contacted	
[ ] No a	action necessary; pro	ocess as is.			
Project M	Manager		Date	· · · · · · · · · · · · · · · · · · ·	
LS-023.	9/03, Rev. 5				

PNNL 0	LOGO 10050 Due 01	35 7-	3 2-07		CHAIN OF	CUSTODY/	SAMPLE ANALYSI	S REQUEST	1	C.O.C.#  W07-011-538  Page 1 of 1
Collector L. D. V	MALL.				Contact/Re			Telephone No.	MSIN	
SAF No.			·		Dot Stew Sampling (			509-376-5056 Purchase Order/	Charge Code	
W07-011 Project Title					Hanford Hanford					
RCRA, NOVEM						1F-N-506 3	3	Ice Chest No.	W5 209	Temp.
Shinned To (Lab) Severn Trent Inc		bland	***************************************		Method of Govt. Ve			Bill of Lading/Ai	r Bill No.	
Protocol RCRA		,,,,,,,,,					ority: 45 Days	Offsite Property	No.	
POSSIBLE SAMI	dioactive Materia	l at cor	centrations that	are not regula	ted for transportation per 49		SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNNL closure of 14 days. WSCF: Batch all PNNL GW samples su		G, I, S, and W 07 S	ivity Exemption: Yes V No SAFs into one SDG, not to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analysi	is		Preservative
B1L6D3		W	12-5-06	1112	1x20-mL P	Activity Scan	,		None	1 10001,41110
B1L6D3		W	V	1	1x500-mL P	9223_COLIFORM	1: Coliform (1)		Na2S2O3 Cool	4C
							ナメメソ	(Q		
		ļ								
<u> </u>	-	<b> </b>								
<u> </u>	<b></b>									
·		-						***************************************		***************************************
		-		<b> </b>			And the second s			
		<del> </del>			,,,,,,,					
	<del></del>	<del> </del>		<b></b>	August Theorem					
	<del> </del>	├								
-		├-		<b> </b>	<u> </u>					
		<del>                                     </del>	1.5		·		· · · · · · · · · · · · · · · · · · ·			was a surface of the
	7	<b></b>	·	1	I	0		····		
Relinquished By Fluor Hanf	ord Phili	),(	Nail	DE	Date/Time   43 \\ C 0 5 2006	A. Sim	In S. Su Ih	DEC 0 5 2006	S =	Matrix *  Soil DS = Drum Solid
Relinquished By  Relinquished By					Date/Time	Received By		Date/Time	SC = SO = SL = W =	Sediment         DL         = Drum Liqui           Solid         T         = Tissue           Sludge         WI         = Wine           Water         L         = Liquid
remiquished by					Date/Time	Received By		Date/Time		Oil $V = Veretation$ Air $X = Other$
Relinquished By				***************************************	Date/Time	Received By		Date/Time	<u> </u>	
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, used in proc	ess)	Disposed By			Date/Time

PNNI. Jo	6 L 060 6 LUOS	07	5	Table Table	CHAIN	OF (	CUSTODY/	SAMPLE ANA	LYSIS I	REQUEST		C.O.C.# W Page	707-011-	
Collection Hanton	d	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		Con	itact/Re	auester		<u></u>	Telephone No.	MSI		1 of AX	1
SAF No.						Oct Stew				509-376-5056 Purchase Order				
W07-011 Project Title		_				lanford :	Sîte			ì				
RCRA, NOVEM						#1	VF-N-506 3	3		Ice Chest No.	W5-115	Temp.		
Shinned To (Lab) Severo Trent Inc		shland		***************************************		thod of !	Shipment			Bill of Lading/A	ir Bill No.			
Protocol	AUTHARALL AU	HIMIMI.	····			lovt. Ve		rity: 45 Days		Offsite Property	No.			
RCRA POSSIBLE SAME ** ** Contains Rar releasable per DOE Or	dioactive Materia	al at cor	centrations that	are not regula	ted for transportation	on per 49		SPECIAL INSTRUCTIO All Labs except WSCF: Bate closure of 14 days. WSCF: Batch all PNNL GW	h all PNNL sampl		, G, I, S, and W 07	tivity Exempt SAFs into one	ion: Yes 🗹 SDG, not to exce	No Led SDG
Sample No.	Lab ID	*	Date	Time	No/Type Con	ıtainer		Samm	le Analysis				D	
B1L6C3	<del> </del>	w	12-5-06	1025	1x20-mL P		Activity Scan	Samp	ic Allalysis		None		Preservative	
B1L6C3		W	V	100	1x500-mL P	,	9223_COLIFORM	: Coliform (1)			Na2S2O3 Coo	4C		
									······································					
									TXXVY	n				
								· · · · · · · · · · · · · · · · · · ·		•				
		ļ												. ,
			*				4mtih.u.		~~~					
		-							,					
	<u> </u>								· · · · · · · · · · · · · · · · · · ·			VT. W.A.		
		<del> </del>		ļ					· · · · · · · · · · · · · · · · · · ·					
	<del> </del>	-												······································
	<del>                                     </del>	+												
		+												
		<del> </del>												
		+												
				10			0							
Relinqui Teor Han	ford that	0	1000		Date/Time ,		Received By).	Print, Sign	,	Date/Time/			atrix *	
Relinquished By				UE	Date/Time		Received By		DE	C 0 5 2006 Date Time	SI. =	Soil Sediment Solid Sludge Water	WI = V	mm Liani issue
Relinquished By					Date/Time		Received By			Date/Time	n =	Oil Air		egetation
Relinquished By					Date/Time		Received By		···	Date/Time	<u>L</u>			-Minter-Live
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, used	d in proce	ss)	Disposed I	Ву	-		Date/Ti	me	

PNNL JG-	L0603	55 73			CHAI	NOF	CUSTODY/	SAMPLE ANALY	YSIS R	EQUEST		C.O.C.#	W07-(	011-530
Fluor H	enford Due	01-	19-07							•		Pag	ge <u>1</u>	of 1
Collector L. D. W	ALL					Contact/Re Dot Stev				Telephone No.	MSIN		FAX	-
SAF No. W07-011						Sampling (		nime into		509-376-5056 Purchase Order/	Charge Code		<del></del>	
Project Title						Hanford								
RCRA, NOVEM							IF-1V-5063			Ice Chest No.	WS 115	Temp.		
Severn Trent Inc		hland				Method of Govt. Ve				Bill of Lading/Ai	r Bill No.			
Protocol RCRA								ority: 45 Days		Offsite Property	No.			<del></del>
POSSIBLE SAMI  ** ** Contains Ra- releasable per DOE On	dioactive Materia	al at cor	centrations that	are not regula	ted for transpor	rtation per 49		SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all I closure of 14 days. WSCF: Batch all PNNL GW samp	PNNL sample		G, I, S, and W 07 S	ivity Exem SAFs into or	ption: Ye	s ✔ No L to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type (	Container		Sample Ar	nalysis		<del>, , , _ , _ , _ , _ , _ , _ , _ , _ , _</del>	T	Preserv	etivo
B1L6C8		W	12-5-06	1154	1x20-mL	Р	Activity Scan				None		rieserv	ative
B1L6C8		W	. N	1	1x500-mL	- P	9223_COLIFORM	l: Coliform (1)	,		Na2S2O3 Cool	4C		
	<u> </u>												·-··	
	<u> </u>	ļ			<u> </u>									
-	ļ	-		<u> </u>				<i>J</i> k	$\langle X \nabla F$	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$				
	<del> </del>	-						· · · · · · · · · · · · · · · · · · ·						
	<del>                                     </del>	-												
		-			<u> </u>	· · · · · · · · · · · · · · · · · · ·						···		
		1					<del>                                     </del>	······································	***************************************					
		<del>                                     </del>			ļ									·
					~									·····
		T									****			
													·	
<u> </u>						A 1979/00.								
Rollinguish - 1 D	A	71-		$\sim$										
Relinquished By Fluor Hanfe L. D. WALL	ord Print	[]	Was	$\mathscr{U}_{D}$	EC 0 5		Received By	4 S. Snith	DE	Date/Time / C 0 5 2006	43)		Matrix *	
Relinquished By					Date/Ti		Received By	S. D. D. L. L. L.		Date/Time	SF = SO = SL =	Sediment Solid Sludge	DI. T WI	= Drum Solid = Drum Liouri = Tissue = Wine
Relinquished By					Date/Ti	ime	Received By			Date/Time	0 =	Water Oil Air	I. V X	<ul><li>Limid</li><li>Vegetation</li><li>Other</li></ul>
Relinquished By		-			Date/Ti	ime	Received By			Date/Time				
FINAL SAMPLE DISPOSITION	E Disposal N	Aethod	(e.g., Return to	customer, per l	lab procedure,	used in proce	l	Disposed By				Date/	Time	

PNNL 16 L060355 W05073 C.O.C. # CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST W07-011-554 Fluor Hanford Acce 01-19-07
Collector C. D. WALL Contact/Requester Telephone No. MSIN FAX Dot Stewart 509-376-5056 SAF No. Sampling Origin Purchase Order/Charge Code W07-011 Hanford Site Project Title Ice Chest No. SAW 5-HNF-N-506 3 Temp. RCRA, NOVEMBER 2006 Shinned To (Lab) Method of Shipment Bill of Lading/Air Bill No. Severn Trent Incorporated, Richland Goyt, Vehicle Protocol Offsite Property No. Priority: 45 Days .RCRA POSSIBLE SAMPLE HAZARDS/REMARKS SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes V No \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG releasable per DOE Order 5400.5 (1990/1993) closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure. Sample No. Lab ID Date Time No/Type Container Sample Analysis Preservative B1L6F3 1316 W 12506 1x20-mL P **Activity Scan** None B1L6F3 W 1x500-mL P 9223 COLIFORM: Coliform (1) Na2S2O3 Cool 4C JKXVG DEC 0 5 2006 Date/Timel 43 Relinquistate Hanford Received By Matrix \* DEC 0 5 2006 = Soil Drim Solid Relinquished By Date/Time Received By SE Date/Time = Sediment = Dram Lioui = Solid = Tissue SI. = Sludge ≃ Wine w = Water = Liquid Relinquished By Date/Time Received By Date/Time = Vegetation  $^{\circ}$ = Oil = Air = Other Relinquished By Date/Time Received By Date/Time FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time DISPOSITION

PNNL 6  Fluor Hant Collector D. WALL	6050 6050	35 ,73	5		CHAIN OI	F CUSTODY	/SAMPLE ANALY	SIS REQUEST		W07-011-562
Collector D	ord	- 01	-, 10,		Contact	/Requester				Page <u>1</u> of <u>1</u>
SAF No.	•				Dot St	tewart		Telephone No. 509-376-5056	MSIN	FAX
W07-011						g Origin rd Site		Purchase Order/(		
Project Title RCRA, NOVEM	IBER 2006					INF-N-506 3		Ice Chest No.		Temp.
Shinned To (Lab)			***************************************			of Shipment		Bill of Lading/Air	5 //5 Bill No	
Severn Trent Inc Protocol	ornorated, Ric	hland	***************************************		Govt.	Vehicle				
RCRA POSSIBLE SAMP	H E HAZADI	26/036	MADEO		1	Pri	iority: 45 Days	Offsite Property	No.	
** ** Contains Rac releasable per DOE Or	dioactive Materia	al at cor	centrations that	are not regula	ted for transportation per	49 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all P. closure of 14 days. WSCF: Batch all PNNL GW sample		G, I, S, and W 07 SA	rity Exemption: Yes No LAFs into one SDG, not to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type Containe	r	Sample An	alvsis		Properties
B1L6F8		W	12-5-06	1359	1x20-mL P	Activity Scan			lone	Preservative
B1L6F8		W			1x500-mL P	9223_COLIFOR	M: Coliform (1)		la2S2O3 Cool 4	·C
	<u> </u>	ļ								
		_								
		-					JK.	XVD		
		-								
	<del> </del>		· · · · · · · · · · · · · · · · · · ·							
			*****							
					·					
				***************************************						
				<b></b>						
Relinquis Tuby Har	ford Print	7		10	Date/Time /43	35		,,,	/25	
L. D. WAI			(1) X		Date/Itme/ TO	Received By	th S. Sin. Yh	Date/Time		Matrix *
Relinquished By		<i>U</i>			Date/Time	Received By	an J- str. ya	DEC 0 5 2000 Date/Time	SE = 5 SO = 5 SL = 5	Solid T = Tissue Solid T = Wine
Relinquished By					Date/Time	Received By		Date/Time	O = (	Vater I. = Liquid Dil V = Vegetation
Relinquished By					Date/Time	Received By		Date/Time	<u> </u>	
FINAL SAMPLE DISPOSITION	E Disposal N	fethod (	(e.g., Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By			Date/Time

		12.5.06 1435				
Client:	PGW	SDG #:_ WO	5073 NA[]	SAF#: <u>C</u>	207-011 NA	<b>4</b>
Work (	Order Number: 🗸	161060355	Chain of Custo		7-011-562,5	
Shippir	g Container ID:	5AUS209				53.
1.	Custody Seals o	on shipping container intact	?	NA [	] Yes (/No()	
2.	Custody Seals d	ated and signed?		NA [	] Yes [ ] No [ ]	
3.	Chain of Custod	ly record present?		ä	Yest Noll	
4.	Cooler températ	ure:NA[Y 5.	Vermiculite/pacl	ding materia	ls is NA ( Wet [ ]	Dry ( I
6.		oles in shipping container:_			()()	~') ( ,
7.	Sample holding	times exceeded?		NA [	] Yes   1 No M	
8.	Samples have:tapecustody se	tals .		hazard label		
9.	Samples are:in good cobroken	ondition	Fire to the second	leaking have air bub for samples	obles requiring head space	<i>;</i> )
10.	Sample pH taker	n? NA[] pH<	2[] pH>2/	pH>9 [ ]		
11.	Sample Location *For documentat	, Sample Collector Listed? ion only. No corrective ac	* ion needed.		Yes [ No [ ]	
12.	Were any anoma	lies identified in sample rec	eipt?		Yes [] No()	
13.	Description of an	omalies (include sample nu	ımbers): <u>W</u>	/A	is addition any strong halo and file making a control hindright control of an impa-	No hard schwarzen -
Sample (	Custodian:	. Smith	Date:/	12.5.0	6 1435	
Clier	nt Sample ID	Analysis Requested	Conditu	on	Comments/Action	n
				The second of th		
		by		ontacted		
	ction necessary; pro					
roject M:	inager		Date			
	03, Rev. 5					

PNNL L	2050	13			CHAIN O	F CUSTODY	//SAMPLE ANALY	SIS REQUEST		S07-010-321  Page 1 of 1
Collector Fi	ue 0/·/	00	<u> </u>			ct/Requester		Telephone No.	MSIN	FAX
-} <u>1</u> 1	D. WALL			A.4::::1::::::::::::::::::::::::::::::::		Stewart ing Origin		509-376-5056 Purchase Order	Charge Code	
<b>SAF No.</b> S07-010						ford Site		i i		
Project Title SURV. OCTOBE	ER 2006				1+	NF-N-506.	3	Ice Chest No.	AW5-115	Temp.
Shinned To (Lab)					Metho	d of Shipment	The state of the s	Bill of Lading/A	ir Bill No.	
Severn Trent Inc. Protocol	ornorated, Ric	hland.			<u>Gov</u>	rt. Vehicle	riority: 45 Days	Offsite Property	No.	
SURV POSSIBLE SAMP ** ** Contains Rad releasable per DOE Or	lioactive Materia	l at cor	centrations that	are not regulat	ed for transportation p	per 49 CFR but are not	SPECIAL INSTRUCTIONS	·		vity Exemption: Yes No No 77 SAFs into one SDG, not to exceed
Sample No.	Lab ID	*	Date	Time	No/Type Contain	iner	Sample Ar	nalysis		Preservative
B1KR39		W	12-4-06	1052	1x1000-mL P	906.0_H3_LSC:	: Tritium (1)		None	
B1KR39	<u> </u>	W	i	7	1x20-mL P	Activity Scan	**************************************		None	
B1KR39		W		V	2x4000-mL G/l	P I129LL_SEP_LE	EPS_GS_LL: I-129 (1)		None	
			•							
-		ļ								
		ļ					JK Z	XXH		
		ऻ—							<b> </b>	
	<del></del>	┼							<u> </u>	
		$\vdash$								
		+-								
		1		<u> </u>				A 1997		
	<del> </del>	T					partition of the second			
	<u> </u>	1			<u> </u>					Alanna
		1					.:'			
		1								
Reimonished by	Dyn	) 7	i Gigg	) [	DEC 0 4 201	Received By .	ith S-8m 4	DEC 0 4 2006		Matrix *
Relinquished By		سل	Juse		Date/Time	Received By		Date/Time	SE = SO = SL =	
Relinquished By					Date/Time	Received By		Date/Time		Oil V = Vegetation
Relinquished By		**************************************			Date/Time	Received By	date destado de la composição de la comp	Date/Time		- American and a second a second and a second a second and a second a second and a second and a second and a
FINAL SAMPL DISPOSITION		Methox	i (e.g., Return to	customer, per	lab procedure, used i	in process)	Disposed By			Date/Time

Date/T		2.4.06 1455				
Client:	Pow	SDG #:	05073 NA[] S	م <u>ک ک</u>	07-010 NA	j
Work (			Chain of Custody			
Shippir	ng Container ID:_	5AWS/15	Air Bill #/_/	11)		
1.	Custody Seals c	n shipping container inta	ct?	NA[])	(es [/ No []	
2.	Custody Seals d	ated and signed?		NA[]Y	/es {/ No [ ]	
3.	Chain of Custoo	ly record present?			es V. No[]	
4.	Cooler temperat	ure:NA [/]	5.Vermiculite/packing	materials i	s NAX   Wet[]D	ry [ ]
6.		oles in shipping container	-	<del></del> -		
7.	Sample holding	times exceeded?		NA (7)	'es[] No[]	
8.	Samples have:tapecustody se	eals .	haza	ard labels	nples labels	
9.	Samples are:	ondition	ieak have	ing air bubble		
10.	Sample pH taker	n? NA() pH	1<2 [/] [pH>2](] [	oH>9 [ ]		
11.	Sample Location *For documental	, Sample Collector Lister ion only. No corrective	d? * action needed.		Yes [] No []	
12.	Were any anoma	lies identified in sample	receipt?		Yes[] NoX]	
13.	Description of ar	oomalies (include sample	numbers): N/A			
Sample (	Custodian:	S. Smith	Date: 12	.4-06	1455	
Clier	nt Sample ID	Analysis Requested	Condition		Controents/Action	
Client Inf	ormed on	by		icted		
	ction necessary; pr					-
Ргојест М	anager		Date	The AS of second second second second second second second second second second second second second second se	V-12-2-12-12-12-12-12-12-12-12-12-12-12-1	*****
	/03, Rev. 5					

PNNL UG 4	0600	37-	3							C.O.C.#	
FINAL OG 2	10050	73			CHAIN OF	CUSTODY/	SAMPLE ANALYSIS	REOUEST	1	W	07-011-468
Collector LUOR H	201-18	.0.	7						-	Page	<u>1</u> of <u>1</u>
CollectorFLUOR H	NFORD	····			Contact/Re			Telephone No.	MSIN	····	AX
M.R.\ SAF No.	YEAL				Dot Stev Sampling (			509-376-5056 Purchase Order/		<u>-</u>	
W07-011 Project Title					Hanford	Site					
RCRA, NOVEME	BER 2006				H !	UF-N-506-	4	Ice Chest No. 5	n(562	Temp.	
Shinned To (Lah) Severn Trent Inco	morated Ric	hland			Method of Govt. Ve			Bill of Lading/A	ir Bill No.		
Protocol RCRA	****************				CIVIC Y	1000000	ority: 45 Days	Offsite Property	No.		
POSSIBLE SAMPI	oactive Materia	l at con	centrations that	are not regulat	ed for transportation per 49	**************************************			, G, I, S, and W 07 S.	vity Exempti AFs into one S	on: Yes V No DDG, not to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analysis				Preservative
B1L674 (F)		W	12-4-06	1247	1x20-mL P	Activity Scan			None		1100011441116
B1L674 (~)		W.	L	1	1x500-mL P	TC99_ETVDSK_I	LSC: Tc-99 (1)		HCl to pH <2		
	V12343						JKXOA		10.00		
										***************************************	And the second s
		-								***************************************	
		<b> </b>									
									7.00		
									·		
		<del> </del>				<u> </u>					
		<u> </u>		L				1.17			
LECTRIFIER PORD M.R. WEIL	Print		Sign		Date/Time/45° EC 0 4 2006	Received By	Print Sign	DEC 0 4 20	- I	Ma Soil	atrix *
Relinquished By					Date/Time	Received By	g	Date/Time	SE = SO = SL =	Sediment Solid Sludge Water	DS = Drom Solid DL = Drom Lioni T = Tissue WI = Wire L = Lionid
Relinquished By					Date/Time	Received By		Date/Time	0 ≃	Oil Air	V = Vegetation X = Other
Relinquished By				<del></del>	Date/Time	Received By		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal !	Method	(e.g., Return to	customer, per	lab procedure, used in proc	ess)	Disposed By			Date/T	ime

PNNL	J6L060373 W05073
	Due 01.18-07

1.7	101 h	27	3											C.O.C	.#		
PNNL V6	L0600	73				(	CHAI	N OF (	CUSTODY/	SAMPLE ANAL	YSIS R	EQUEST				7-011-	324
du	201.18	-07	7									-			Page ]	l of 1	1
Collector HANF	ORD							Contact/Re			ľ	Telephone No.		MSIN	FAX	**************************************	
SAF No. M.R. WEI	-							Dot Stews Sampling O		, and the second	1	509-376-5056 Purchase Order/	Charge C	Code			
W07-011			<del>-</del> -					Hanford S								<del></del>	
Project Title RCRA, NOVEM	BER 2006							HOW	1= .N-206 5	·/		lce Chest No. ノ	MLS	62 Ter	np.		
Spinned To (1 sh) Severn Trent Inco	amounted Dic	blond	*****	**************************************				Method of S Govt. Vel				Bill of Lading/Ai	r Bill No	•			
Protocol	Ulananan III.	102101	*******	*************	44400041400	***************************************	<del>(rikinarasana amanara</del>	COVC YC		ority: 45 Days	1	Offsite Property	No.	***************************************	**************************************		
RCRA POSSIBLE SAMP ** ** Contains Rad eleasable per DOE Ore	ioactive Materia	il at cons			are not	regulate	ed for transp	ortation per 49		SPECIAL INSTRUCTIONS All Labs except WSCF: Batch al closure of 14 days. WSCF: Batch all PNNL GW san	ll PNNL sample:	s submitted under A,	G, I, S, an	otal Activity E d W 07 SAFs ii			
Sample No.	Lab ID	*	Ι	Date	Ti	me	No/Type	: Container		Sample A	Analysis				Pr	eservative	
B1L5V7		W	12-4	406	10	32	1x20-ml	_ P	Activity Scan				None				
B1L5V7	1	W	1.52	1		1	1x500-m	nL P	TC99_ETVDSK_L	-SC: Tc-99 (1)			HCl to p	H <2			
B1L5V7		W	*******				1x1000-	mL P	906.0_H3_LSC: T	ritium (1)		·	None				
B1L5V7		W		-	-4	-	1x1000-	mL P	9310_ALPHABET	A_GPC: Alpha + Beta (2)			HNO3 to	pH <2			
						`.					JKKO	E					
	ļ	-			ļ		ļ										
		-			<del> </del> -	······································	<del> </del>				·						
	<del>                                     </del>				├					19 <sup>10</sup> No. 10 10 10 10 10 10 10 10 10 10 10 10 10							
		+			$\vdash$		<del> </del>	,,,									·
		+	<del>                                     </del>		<del>                                     </del>	***			<u> </u>								
	1	$\dagger$	<u> </u>		$\vdash$											·····	·····
***	.1	_l	1	····	.L		<del></del>	غسور د					145		<del>~~~</del>		
Relinquished By  FLUOR HANF  Relinquished By	ORD CLA	M	æi	$\int_{0}^{1}$			DEC 0	Time / /5 - 4 2006	Received By Received By	Sign Sign	DE	Date/Time	16	S = Soil SE = Sedir		DS = 1 DL = 1	Drim Solid Drim Liqui
Relinquished By								/Time	Received By			Date/Time		SO = Solid SI = Slude W = Wate O = Oil A = Air	ze	WI = ! I. = I V = !	Tissue Wine Liquid Vegetation Other
Relinquished By			***				Date	/Time	Received By			Date/Time					
FINAL SAMPL	E Disposal	Method	(e.g.,	Return to	custor	ner, per	lab procedu	re, used in proc	ess)	Disposed By	,				Date/Time	·	

DISPOSITION

#### Sample Check-in List

		2.4.06 1455		s	
Client:_	Pów	SDG #: <u>UJ</u> O	<i>5073</i> NA[	] SAF#: <u></u> ω	007-011 NA ()
		61060373			7-011-324,468
		nL562	Air Bill #	NIA	
1.	Custody Seals or	shipping container intac	et?	NA ( )	Yes [/ No[]
2.	Custody Seals da	ited and signed?		NA[]	Yes (/ No [ ]
3.	Chain of Custod	y record present?			Yes [] Nc []
4,	Cooler temperatu	ire:NA 🛭	5.Vermiculite/pa	cking material	s is NA [] Wet [] Dry []
6.	Number of samp	les in shipping container	:2.	and the state of t	
7.	Sample holding t	imes exceeded?		NA [/]	Yes[] No[]
8.	Samples have:tapecustody se	als .		_hazard abels _appropriate s	s samples labels
9.	Samples are:in good cobroken	ndition	Professional Confession	_leaking _have air bubl y for samples i	bles requiring head space)
10.	Sample pH taken	? NA[] pH	1<2 // pH>2/	/) pH>9()	
11.		, Sample Collector Lister ion only. No corrective			Yes 🕖 No []
12.		lies identified in sample	•		Yes [] No [X
13.	Description of an	omalies (include sample	numbers):	N/A	
Sample	Custodian:	S. Smith	Date:_	13.4.	06 1455
Clie	nt Sample ID	Analysis Requested		lition	Comments/Action
Client In		by _		in contacted	
[ ] No a	action necessary; pro	ocess as is.			
Project M	lanager		Date_		
ren.21	2/03 Rev 5				

99

PNNIU61	10603	76 13	01-19	-07	CHAIN OF	CUSTODY	//SAMPLE ANAL	YSIS REQUEST	Γ		507-011-402 1 of 1
Collector K.1	r Hanford	<u></u>	<i>U7</i> 1 * *		Contact/R			Telephone No.	MS		AX
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-			Dot Stev Sampling		, , , , , , , , , , , , , , , , , , , ,	509-376-5056 Purchase Order			
SAF No. S07-011		N-10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			Hanford	Site					
Project Title SURV, NOVEM	BER 2006				HNE	-N-50	6 Y	Ice Chest No.	200-ac	Temp.	
Shinned To (Lah)					Method of	Shipment		Bill of Lading/			
ISevern Trent Inc Protocol	ornorated, Ric	hland	**************************************	<del></del>	Goyt. Y		1. 26 45 Davis	Offsite Propert	v No.		
SURV POSSIBLE SAMP ** ** Contains Rac releasable per DOE Or	lioactive Materia	l at conc		are not regulate	ed for transportation per 4		closure of 14 days.		Total A A, G, I, S, and W 0		ion: Yes 🗹 No 🗔 SDG, not to exceed SDG
Sample No.	Lab ID	+	Date	Time	No/Type Container		Sample	Analysis			Preservative
B1L3J8		W	d-5-00	1146	1x1000-mL P	906.0_H3_LSC			None		
B1L3J8	<u> </u>	w			1x20-mL P	Activity Scan			None		
		1 1									
	1						(ナバ)	X06			
										***************************************	
									1		
		V									
			$\overline{}$								
***************************************		1 1	$\overline{}$			<u> </u>	Auto 1				
· · · · · · · · · · · · · · · · · · ·		1								***************************************	
		1 1			NIC.	<del>}</del>					
		$\Box$				12-5-0	L	·			* · · · · · · · · · · · · · · · · · · ·
		+-1				1-1	<u> </u>				
		+					The state of the s				
		$\dagger \exists \dagger$		<del>                                     </del>				- William Control of the Control of		***************************************	
· · · · · · · · · · · · · · · · · · ·		l		L	111.2	-		The state of the s	1435		
Relinquished BY Ha K. J. YO	inford Print	× -	Sign		DEC 0 5 200	6 Received By	Y Sign	DEC at 0 5			atrix *
Relinquished By					Date/Time	Received By	141 3-0mit	Date/Time	SE.	= Soil = Sediment = Solid = Sludge	DS = Drum Solid DL = Drum Lion T = Tissue WI = Wine
Relinquished By					Date/Time	Received By		Date/Time	W O A	= Water = Oil = Air	I. = Liquid V = Vegetation X = Other
Relinquished By					Date/Time	Received By		Date/Time		AV	
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, used in pro	cess)	Disposed By			Date/T	ime

PNNLUG.	1-0603 10507	376 3			CHAI	NOF	CUSTODY	SAMPLE ANA	ALYSIS F	REQUEST	(	C.O.C.#	S07-	-011-	-390		
- dus	01-19-	07			·			•				Pag	ge <u>1</u>	of ]	1		
1K	J. YOUNG				1	Contact/Re		***************************************		Telephone No.	MSI	<del></del>	FAX				
SAF No. - S07-011					1	Sampling (	Origin			509-376-5056 Purchase Order/	Charge Code						
Project Title						Hanford											
SURV. NOVEMI Shinned To (Lab)	BER 2006						Ice Chest No.  GRY-06-007  Shipment  Bill of Lading Air Bill No.						Temp.				
Severn Trent Inco	omorated. Ric	hland	***************************************			Method of Govt. Ve				Bill of Lading/Ai	r Bill No.						
Protocol SURV								ority: 45 Days		Offsite Property	No.	<del></del>	~ <del>~~~~</del>				
POSSIBLE SAMPI ** ** Contains Rad releasable per DOE Orc	lioactive Materia	al at conc	centrations that a	are not regulate	ed for transpor	rtation per 49	· · · · · · · · · · · · · · · · · · ·	SPECIAL INSTRUCTION All Labs except WSCF: Bate closure of 14 days. WSCF: Batch all PNNL GW	tch all PNNL sample		G, I, S, and W 07	tivity Exerr SAFs into or	ption: Y ne SDG, no	es vo	No Led SDG		
Sample No.	Lab ID	*	Date	Time	No/Type (	Container		Some	1 - 411-			T					
B1L429	<b> </b>	w	12.5-06	ļ	1x1000-m		906.0_H3_LSC: T		ple Analysis		NI		Preser	vative	<u>i</u>		
B1L429		W		1 L	1x20-mL		Activity Scan	1144411 (1)			None None				•		
											None						
									KX07								
									<u> </u>			·					
		1		1													
				, <u> </u>													
					<u> </u>	***************************************			····								
		$\Box$					<del></del>		***************************************								
			,				<del>)</del>	***************************************									
				7	< T	TIK	1		****								
					1/ 1/												
				,		·	12-5-06	7,000							<del></del>		
					1				<u> </u>								
				,	·	_								-			
					1							· · · · · · · · · · · · · · · · · · ·	AT-				
						143	50				:17						
Relinglicks Panford K. J. YOUNG	d Britis	/	Sign		Date/Tip	ime / T	Received By Am. 4	<b>C</b> {	Sign L/	DEC 0 5 20	0A 7	j	Matrix *				
Relinquished By		•			Date/Tir	~	Received By	1 0 0m. 11	<u>~</u>	Date/Time	S = SE = SO = SL =	Sediment Solid Sludge	DS DI T W	I. = D: = Ti			
Relinquished By					Date/Tir	me	Received By		**************************************	Date/Time	O =	Water Oil Air	r. V X	= V	egetation		
Relinquished By					Date/Tit	me	Received By			Date/Time	<u> </u>				· · · · · · · · · · · · · · · · · · ·		
FINAL SAMPLE DISPOSITION	Disposal M	lethod (e	(e.g., Return to c	ustomer, per la	ab procedure,	used in proce	255)	Disposed I	Ву		**************************************	Date	/Time				

Date/Ti	me Received: /	2-5-06 1435			
Client:_	Pow	SDG#: WOS	5073 NA[]	SAF#: 5	07-011 NA
		61060376			
	_	RP-06-002			
1.	Custody Seals o	n shipping container intact	?	NA[]	Yes [/ No [ ]
2.	Custody Seals d	ated and signed?		NA[]	Yes (/ No[]
3.	Chain of Custod	y record present?		•	Yes [ No [ ]
4.	Cooler temperat	ure:NA 📝 5	.Vermiculite/packii	ng material:	s is NA // Wet ( ] Dry [ ]
6.		les in shipping container:			
7.		times exceeded?	•	NA [/	Yes[] No[]
8.	Samples have:tapecustody se	als.	ha	12ard labels	
9.	Samples are:in good cobroken	ndition	ie ha	aking ive air bubb	
10.	Sample pH taker	? NA[] pH<	(2[] pH>2/	pI <del>-</del> 3>9 [ ]	
11.	Sample Location *For documentat	, Sample Collector Listed! ion only. No corrective ac	/ * ction needed.		Yes No[]
12.	Were any anoma	lies identified in sample re	ceipt?		Yes!] No!
13,	Description of an	omalies (include sample n	umbers):/\footnote{V}	/A	
Sample (	Custodian:	Smith	Date: /	2.5-0	16 1435
Clier	nt Sample ID	Analysis Requested		1	Comments/Action
		by			
	ction necessary; pro				
Project Ma	anager		Date	of the state of th	¥
	/03, Rev. 5				The state of the s

	08013			CHAIN (	OF CUSTODY	SAMPLE ANALY	SIS REQUES		C.O.C.# <b>I</b> (	7-007-29
ollector Flu	û 01.19 or Hanford	.0./							Page <u>1</u>	of <u>1</u>
V V	J. YOUNG			Cont	act/Requester ot Stewart		Telephone No.	MSIT	N FAX	
AF No. I07-007 oject Title				Samp	oling Origin		509-376-5056 Purchase Orde			
oiect Title	- Lake time			1	mford Site					
TWO NATIONALITY	)-LOL NOVEM	BER 2006			NF- N-506	<u>, '</u>	Ice Chest No.	6-002	Temp.	
inned To (Lab) Severn Trent Inco	ornorated Richle	md			od of Shipment		Bill of Lading/A	Air Bill No.		
otocol		<del>(44)</del>	***********	<u> </u>	vt. Vehicle		Offsite Propert	. No		
CERCLA SSIBLE SAMP	I F HAZARD					rity: 45 Days	L	4		
<b>* **</b>		regulated fo	r transportat	faterial at conce ion per 49 CFR ler 5400.5 (1996	entrations that are not 8 but are not 0/1993)	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all F closure of 14 days. WSCF: Batch all PNNL GW samp		A, G, I, S, and W 07 S	ivity Exemption: SAFs into one SDG,	Yes V No not to exceed SDO
Sample No.	Lab ID	- Date	i ime	No/ Lype Conta	uner	Sample Ar	nalysis		Pres	servative
31L1P0	ļ		0948	1x20-mL P	Activity Scan	100000000000000000000000000000000000000		None		
1L1P0	'	w		3x1000-mL G	P GAMMA_GS: Lis	st-1 (10)		HNO3 to pH <2		
					12-5-0		TK3QJ			
lin <b>Gluxord-tenforc</b>	1 Print	6:		/	14.95			11.125		
K. J. YOUNG		Sign	_	DEC 0 5	2006 L. Smit	Print Sign	DEC 0 5 2	006	Matrix	*
elinquished By	HARDON AND AND AND AND AND AND AND AND AND AN	· · · · · · · · · · · · · · · · · · ·		Date/Time	Received By		Date/Time	SE = SO =	Sediment Solid	DS = Drim Sc DI = Drim Li T = Tissue WI = Wine
linquished By				Date/Time	Received By		Date/Time	W = 0 =	Water Oil	W = Wine L = Liquid V = Vegetation X = Other
elinquished By				Date/Time	Received By		Date/Time			
INAL SAMPLE	Disposal Metl	hod (e.g., Return to	o customer, per l	ab procedure, used in	n process)	Disposed By			Date/Time	

Date/T	ime Received: 13	5-061435			
Client:	Por	SDG #:_ WOS	5073 NA[]	SAF#:	07-007 NA I
Work (	Order Number: <u>V</u>	64080130			7-007-29
Shippin	ng Container ID &	RP-06-00Z	Air Bill #		
1.	Custody Seals o	n shipping container intact	?	NA[]	Yes [/ No[]
2.	Custody Seals d	ated and signed?			Yes [/] No [ ]
3.	Chain of Custod	y record present?		•	Yes [/ No [ ]
4.	Cooler températi	ure:NA[] 5.	Vermiculite/pacl	cing material	s is NA [/] Wet[] Dry[]
6.		les in shipping container:_			
7.	Sample holding	imes exceeded?		NAX	Yes[] No[]
8.	Samples have:tapecustody se	als.		hazard label appropriate :	s samples labels
9.	Samples are:in good cobroken	ndition		leaking have air bub	
10.	Sample pH taken	? NA[] pH<	2/1 pH>2[]	pH>9 [ ]	
11.	Sample Location *For documentation	Sample Collector Listed? on only. No corrective act	*ion needed.		Yes // No[]
12.	Were any anomal	ies identified in sample rec	eipt?		Yes [ ] No [/]
13.	Description of an	omaties (include sample nu	mbers): N F	<del>}</del>	
		0	· · · · · · · · · · · · · · · · · · ·		
Sample (	Custodian:	. Smith	Date: 1	2.5-06	, 1435
Clie	nt Sample ID	Analysis Requested	Conditi	on	Comments/Action
Client Inf	ormed on	by			
	ction necessary; pro				
roject M	anager	-	Date		3
	/03, Rev. 5				

PNNL JOH	108019 100507	58 13 .19.	07		CHAIN (	OF (	CUSTODY/	SAMPLE ANA	LYSIS I	REQUEST	Γ		S07-010-283
Collector Fluor Ha	411014				Conta	act/Red	quester			Telephone No.	MS	Page	: <u>1</u> of <u>1</u>
SAF No.	<u>VC</u> 4-					t Stewa				509-376-5056		117	PAX
S07-010 Project Title						nford S				Purchase Order	/Charge Code		
SURV. OCTOBI	ER 2006					4NF	-N-5063			Ice Chest No	115-115	Temp.	
Shinned To (Lab) Severn Trent Inc.	omorated Dia	bland	•••				hipment	****		Bill of Lading/A	ir Bill No.		
Protocol	urnoralini. Kit	шаши		······································	Cio	vt. Veh				Offsite Property			
POSSIBLE SAMP	I E HAZARI	S/DF	MADVS				Prio	rity: 45 Days	·	<u> </u>	140.		
** ** Contains Rad releasable per DOE Or	lioactive Materia	1 at cor	centrations that	t are not regulat	ted for transportation	ı per 49 (	CFR but are not	SPECIAL INSTRUCTIO All Labs except WSCF: Bate SDG closure of 14 days. Submit invoices & deliverable	ch all PNNL GW s		Total Adder A, G, I, S, and	ctivity Exemp W 07 SAFs into	tion: Yes V No Loone SDG, not to exceed
Sample No.	Lab ID	*	Date	Time	No/Type Conta	iner		Samp	ole Analysis		***************************************		Preservative
B1KPP6		W	12-6-06	0948	1x1000-mL P		906.0_H3_LSC: Ti				None		reservative
B1KPP6		W	4	V	1x20-mL P		Activity Scan				None		
									······································				
			····	ļ					ナバ30人	<i></i>			-
		-		<b>_</b>				Anna					
	ļ	-											
				<u> </u>					· · · · · · · · · · · · · · · · · · ·				
		$\vdash$		ļ									
		-											
									·····				
Land 19 19 19 19 19 19 19 19 19 19 19 19 19	Δ.	L1											
Relination of Barrion	Print	4	XIV	DE	Date/Time /	70°	Secretor By Shul	L S. Sm. UL	<sup>gn</sup> DE	Date/Time / C 0 6 2006	400	M = Soil	atrix *  DS = Drom Solid
Relinquished By  Relinquished By					Date/Time		Received By			Date/Time	SE = SO = SL =	Sediment Solid Slindge Water	DL = Drim Liqui T = Tissue WI = Wine L = Liquid
,					Date/Time	F	Received By			Date/Time	0 =	= Oil = Air	V = Vegetation X = Other
Relinquished By					Date/Time	F	Received By			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal M	lethod (	e.g., Return to	customer, per l	ab procedure, used in	n proces:	s)	Disposed I	Ву			Date/T	ime

Date/Ti	me Received:/	2.06:06	14:08			
Client:_	Pow	S	DG#: W09	7273 NA[	] SAF#:_ <u>•</u>	507-010 NA []
Work C	Order Number: 🗸	le 1 080.	158			67-010-283
Shippin	Order Number: <u> </u>	307 0	to sks			
1.	Custody Seals o		12 holor			] Yes [/ No[]
2.	Custody Seals d	ated and sig	ned?			] Yes [/] No [ ]
3.	Chain of Custoc	ly record pre	sent?			Yes / No[]
4.	Cooler temperat	ure:	_NA/] 5.	Vermiculite/pac	king materia	Is is NAX] Wet[]Dry[]
6.	Number of samp					
7.	Sample holding	times exceed	ded?		NA V	1 Yes[] No[]
8.	Samples have:tapecustody se	als			_hazard label	
9.	Samples are:in good cobroken	endition		atematical and the second and the se	_leaking _have air bub r for samples	bles requiring head space)
10.	Sample pH taker	?	NA[] pH<:	2[] pH>2/	[] 9 <hq< td=""><td></td></hq<>	
11.	Sample Location *For documentat	, Sample Co ion only. No	llector Listed?	* ion needed.		Yes // No[]
	Were any anoma		·			Yes [] No []
13.	Description of an	omalies (inc	lude sample nu	imbers): <u>N</u>	3	
Sample C	Custodian: //	f. In	ith	Date:	12.6.0	(c 14.08
Clien	t Sample ID	Analysis	Requested	Condi	tion	Comments/Action
Client Info	rmed on					1
	tion necessary; pro					
roject Ma	nager			Date		
	03, Rev. 5					

PNNI, J & L	0801 0800 2000	6 E 73 ue	01-19-	07	CHAIN O	F CUSTODY	SAMPLE ANALYSIS	REQUEST		C.O.C.# W07-011-			
Collector L. D. \	Hanford					Contact/Requester Telephone N			MSIN	Page 1 of	1		
Collector L. D. \ SAF No. W07-011	F No.						Dot Stewart ampling Origin			509-376-5056			
W07-011 Salida Project Title						ruren			hase Order/Charge Code				
RCRA, NOVEM	BER 2006					HNF-N-5063	Ice Chest No.	Ice Chest No. Temp.  Bill of Lading/Air Bill No.					
Shinned To (Lab)	rmanatad Dial	hland		14,	Method	of Shipment	Bill of Lading/Ai						
Severn Trent Incorporated, Richland Go Protocol RCRA POSSIBLE SAMPLE HAZARDS/REMARKS						. Vehicle		Offsite Property No.					
						Pri	Olisite Property						
** ** Contains Radi releasable per DOE Ord	oactive Materia	l at con	centrations that	are not regulat	ed for transportation po	er 49 CFR but are not	SPECIAL INSTRUCTIONS H All Labs except WSCF: Batch all PNNL sar closure of 14 days. WSCF: Batch all PNNL GW samples subm		G, I, S, and W 07 S.	vity Exemption: Yes   AFs into one SDG, not to exce	No Led SDG		
Sample No.	Lab ID	*	Date	Time	No/Type Contain	er	Sample Analysis			Preservative			
B1L6H2		W	12-6-06	13/4	1x20-mL P	Activity Scan	None			rieservative			
B1L6H2		W	V		1x500-mL P	F00 I C00 C1				Na2S2O3 Cool 4C			
***************************************	·												
							<i>ゴK317</i>						
			·										
										-			
			*****		-				· · · · · · · · · · · · · · · · · · ·	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-		
			7			·							
Relinquished By Fluor Hanford	Print	<u> </u>	(Kigg)	n	Date/Time  40	1) Received By -	Print Sign	Date/Time	408	Matrix *			
Policy Parison							4 S. Smith	DEC 0 6 200	<b>6</b> s =	Soil DS = D	mm Soli		
telinquished By					Date/Time	Received By		Date/Time	SE = SO =	Sediment DI. = D	Inim Lia Issue		
Relinquished By Date/Time						Received By		Date/Time	Water I. = I.	ioniđ Jegetation			
Relinquished By Date/Time						Received By		Date/Time	1				
FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in procedure DISPOSITION						process)	Disposed By			Date/Time			

#### STL

#### Sample Check-in List

Date/T	ime Received:	12-6-06 1408			
Client:	POW	SDG #: W050	73_NA[]	SAF#: <u>u</u>	167-611 NA []
Work (	Order Number:	16L08U1680 3FS 12110106	Chain of Custody	# WUT	7-011-568
			> Air Bill # <u> </u>	A	
1.	Custody Seals of	on shipping container intact?		NA ( )	Yes [/ No []
2.	Custody Seals of	lated and signed?			Yes / No[]
3.	Chain of Custoo	dy record present?		*	Yes [ No [ ]
4.	Cooler tempéra	ture:NA[] 5.V	ermiculite/packin		/
6.		ples in shipping container:	,		
7.	Sample holding	times exceeded?		NA 🕖	Yes [ ] No [ ]
8.	Samples have:tapecustody s	eals .		zard labels propriate s	amples labels
9.	Samples are:in good co	ondition		ve air bubt	oles equiring head space)
10.	Sample pH take	n? NA[] pH<2	() pH>2[/)	pH>9[]	
11.	Sample Location *For documenta	n, Sample Collector Listed? * tion only. No corrective action	on needed.		Yes [7] No []
12.	Were any anoma	alies identified in sample rece	ipt?		Yes[] No[]
13,	Description of a	nomalies (include sample nun	nbers): N/A		
		7			
Sample	Custodian:	Smith	Date:	2.6.06	1408
Clie	nt Sample ID	Analysis Requested	Condition		Comments/Action
		by			and the second s
	ction necessary; p				
roject M	[anager		Date		
	7/03, Rev. 5				

PNNL 16	L0802 W050 W011	3.5 7.3 9.0	7	ł	CHAIN	OF (	CUSTODY/	SAMPLE ANALY	SIS REQUEST		107-010-34 Page 1 of 1
Collector Fluor Han	Sand		<u></u>	<del></del>	Co	ntact/Re	quester		Telephone No.	MSIN	FAX
SAF No D. WAL	L L					Dot Stew			509-376-5056	<u> </u>	IM
107-010	······					Hanford			Purchase Order	r/Charge Code	
Project Title  2ZP1-LOL NOV	EMBER 2004	;				UN	F-N-506 3		Ice Chest No.	Ten	DD.
Shinned To (Lab)	******				Me		Shipment		Bill of Lading/A	1/5 // 5	
Severn Trent Inc Protocol	ornorated Ric	hland				Govt. Ve					
CERCLA							Prio	rity: 45 Days	Offsite Property	v No.	
POSSIBLE SAMP  ** ** Contains Rac releasable per DOE Or	lioactive Materia	al at con	centrations that	are not regulate	ed for transportat	ion per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all F closure of 14 days. WSCF: Batch all PNNL GW samp		A, G, I, S, and W 07 SAFs int	connection: Yes V No Loone SDG, not to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type Cor	ntainer		Sample An	alysis		Preservative
B1L274		W	12-6-06	1142	1x20-mL P	**************************************	Activity Scan			None	Trosorvative
B1L274		W	1	111	2x4000-mL	G/P	I129LL_SEP_LEP	S_GS_LL: I-129 (1)		None	
B1L274		W	<b>V</b>		3x1000-mL	G/P		CIP_GPC: Sr-90 (1)		HNO3 to pH <2	
	<u> </u>										
		-						<i>JX</i> 4	(W7		
		+-									
***************************************	1	+						· · · · · · · · · · · · · · · · · · ·			
	<del> </del>	1-1		<del> </del>				······································			
		╁─┤	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								*****
	<u> </u>	+-					· · · · · · · · · · · · · · · · · · ·				
	<u> </u>	-	··								*
	<u> </u>	+-		<del> </del>							
		+-1						·			
	<del> </del>	-		ļ							
					· · · · · · · · · · · · · · · · · · ·						
	<u> </u>			<u> </u>							
Relinquished By	Print	·	(Gam/	)	Date Cine	). 	Beceived By	7		117.6	
Relinguished By Fluor Henfor C. D. WALL		111	Vo VIV	<b>n</b>			secenced By	Print Sign	DEC 0 C and	1704	Matrix *
Relinquished By	1100	· //		U	EC 0 6 2 Date/Time		A. Swith	5.8m.4h	DEC 0 6 200  Date/Time	S = Soil SE = Sedime SO = Solid SI = Sludge	T = Tissue
Relinquished By					Date/Time		Received By		Date/Time	W = Water O = Oil A = Air	I. = Liquid V = Vegetation X = Other
Relinquished By					Date/Time		Received By		Date/Time		
FINAL SAMPLI		Method	(e.g., Return to	customer, per la	ab procedure, use	ed in proce	ss)	Disposed By		E	Date/Time

#### STL

Sample Check-in List

Date/T	ime Received:	1206.06 140	8	I07-010
Client:	Pow	SDG #: ₩0	5073 NA() SAF	107-010-34 SKS
		41080235		
Shippir	ng Container ID:_	SAWS 115	Air Bill#	<u> </u>
1.	Custody Seals o	n shipping container intac	et?	NA [] Yes [/ No []
2.	Custody Seals d	ated and signed?		NA[] Yes [] No[]
3.	Chain of Custoc	y record present?		Yes [ ∕ No [ ]
4.	Cooler températ	ure:NA [X	5.Vermiculite/packing m	aterials is NA [ ] Wet [ ] Dry [ ] .
6.		oles in shipping container		<i>y</i> 3300.
7.	Sample holding	times exceeded?	ì	NA [ Yes [ ] No [ ]
8.	Samples have:tapecustody se	als .	hazard	
9.	Samples are:in good cobroken	endition	ieaking have a (Only for sam	
10.	Sample pH taker	n? NA[] pH	<2 // pH>2/1 pH	>9[]
11.	Sample Location *For documentat	, Sample Collector Listed ion only. No corrective a	]? * action needed.	Yes [] No[]
12.	Were any anoma	lies identified in sample r	eceipt?	Yes () No ()
.3,	Description of an	omalies (include sample	numbers): N/F.	/
		) ;		
Sample (	Custodian:	· Smith	Date: <u>/2</u>	4.06 1408
Clier	nt Sample 1D	Analysis Requested	Condition	Comments/Action
lient Info	ormed on	by	Person contacte	d
] No ac	ction necessary; pro	ocess as is.		
roject M	anager	-	Date	
	/03, Rev. 5			

1/9/2007 1:39:25 PM		San	nple Prep	paration/A	nalysis		Balance I	ld:1120482733
384868, Pacific Northwest National Pacific Northwest National Lab	•	AZ Gross Alph S7 Gross Alph	a PrpRC501	4	-			#: <u>135</u>
AnalyDueDate: 01/15/2007	305on3	51 CLIENT: HA					Sep1 DT/Tm Tec	h:
Batch: 6345306 WATER SEQ Batch, Test: None	pCi/L		PM, C	uote: SA , 5	7671		Sep2 DT/Tm Tec	h:
							Prep Tec	h: ,BockJ / A PA
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Comments:
1 JKPLL-1-AC	202.10g,in		, <	39,56	.50	10B	1628	1/12/0701
J6L020189-1-SAMP			( . /	57,0			1	
12/01/2006 11:27	AmtRec: 20N	AL,8XLP #Co	ontainers: 9			Scr:	Alpha: 1.32E-03 uCi/Sa	Beta: -2.66E-04 uCi/Sa
2 JKPL6-1-AA J6L020192-1-SAMP	199.30g,in			73.2	.50	100	L	
					- vol v v			<u> </u>
12/01/2006 10:22	AmtRec: 20N	/L,LP #Cor	ntainers: 2			Scr:	Alpha: -6.02E-05 uCi/Sa	Beta: 1.39E-05 uCVSa
3 JKX0E-1-AC J6L060373-2-SAMP	90.00g,in			46.7	100	10A	400	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			10.			1828	
12/04/2006 10:32	AmtRec: 20N	/L,500MLP,2XLP	#Containers: 4			Scr:	Alpha: -11.67E-04 uCi/Sa	Beta: 8.12E-05 uCi/Sa
4 JKX0E-1-AG-X	93.20g,in			49.9	601			
J6L060373-2-DUP	*****			191.1		10 D		
12/04/2006 10:32	AmtRec: 20N	1L,500MLP,2XLP	#Containers: 4			Scr:	Alpha: -1.67E-04 uCi/Sa	Beta: 8.12E-05 uCi/Sa
5 JK72Q-1-AA-B	199.80g,in				100	· · · · · · · · · · · · · · · · · · ·		Dota. 0.12E-03 110V0a
J6L110000-306-BLK				0.7	, - 0	10.0		
12/04/2006 10:32	AmtRec:	#Containe	ers: 1	,		Scr:	Alpha	Date
6 JK72Q-1-AC-C	201.80g,in	ASD4085	1/	0.1	100	/ I P	Alpha:	Beta:
J6L110000-306-LCS		12/18/06,pd 02/09/06,r		0.6	100	{ * *	b	<b>/</b> /
12/04/2006 10:32	AmtRec:	#Containe	ers: 1	***************************************		Ser:	Alpha:	Beta:
				· · · · · · · · · · · · · · · · · · ·				ove.
·								
	i, fi - Final Amt, di - Dilut r - Reference Dt. ec-Enrich			Page 1	ISV -	Insufficient Volur	me for Analysis	WO Cnt: 6

Prep\_SamplePrep v4.8.26

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

	9:31 PM			Sar AZ Gross Alph S7 Gross Alph 51 CLIENT: HA	a by GPC usin				Piţ	e Id:1120482733 pet #:	
Batch: 6345				SI CLIENT: HA	NFURD				Sep1 DT/Tm T	ech:	
SEQ Batch, Te			pCi/L						Sep2 DT/Tm T	ech:	
									RI Prep T	ech: ,BockJ	
Work Order, Sample Date	Lot, Total Time Amt/L	nit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments
Comments:	: PA LZ.C	SIBI	G 00			<u> </u>		11 .0	(2411) 011016	inivoate	
	• •	,	·								
				, <b>v</b>	1		*				
KPLL1AC-SAME ALPHA	Pacific Northwe P Constituent L RDL:3		Laboratory			ddex			. 1/12/07 /s	1PA	
384868, I	Pacific Northwe P Constituent L RDL:3	ist:		Pacific UCL:	Northwest Na				. Ulizlo7 /	A P/A	
384868, ECPLLIAC-SAME ALPHA TZQIAA-BLK: ALPHA TZQIAC-LCS:	Pacific Northwer P Constituent L RDL:3 RDL:3	ist: pCi/L pCi/L	LCL:	Pacific UCL:	Northwest Na				. Ilizlo7 /	1PA	
384868, ERPLLIAC-SAME ALPHA K72Q1AA-BLK: ALPHA K72Q1AC-LCS: AM-241	Pacific Northwee  P Constituent I RDL:3  RDL:3  RDL:	ist: pCi/L	LCL:	Pacific UCL:	Northwest Na				. Ilizlo7 p	1PA	
384868, I RPLL1AC-SAME ALPHA K72Q1AA-BLK: ALPHA K72Q1AC-LCS: Am-241 KPLL1AC-SAME Uncert I	Pacific Northwee P Constituent I RDL:3 : RDL:3 : RDL: Calc Info: Level (#s).: 2	pCi/L pCi/L pCi/L	LCL:	Pacific UCL:	RPD: RPD: RPD:	ational Lab,			. Ilizlo7 p	PA	
384868, I	Pacific Northwee  P Constituent L RDL:3  RDL:3  RDL:  Calc Info: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L	LCL: LCL: LCL:70	Pacific UCL: UCL: UCL:130	RPD: RPD: RPD:20 N Sci.No	ational Lab,	SA , 5767		. Ulizlo7 /	APA	
384868, I CPLLIAC-SAME ALPHA (72Q1AA-BLK: ALPHA (72Q1AC-LCS: Am-241 CPLLIAC-SAME Uncert I (72Q1AA-BLK: Uncert I (72Q1AC-LCS:	Pacific Northwee  P Constituent L RDL:3  RDL:3  RDL:  Calc Info: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L Decay t	LCL: LCL:70 to SaDt: Y	UCL: UCL: UCL:130 Blk Subt.:	RPD: RPD: RPD: RPD:20 N Sci.No	etional Lab,	SA , 5767		. Ilizlo7 A	PA	

1/9/2007 1:35	07 PM			Sar	nple	Preparat	ion/An	alysis			Balan	ce ld:1120482733	75444
				BC Gross Beta	-	•		·				ipet #:	
				S8 Gross Beta	-	_	Y-90 cur	ve					
AnalyDueDate	: 01/15/2007			51 CLIENT: HA	NFO	RD					Sep1 DT/Tm	Tech:	
Batch: 63453 SEQ Batch, Test:		F	oCi/L								Sep2 DT/Tm	Tech:	
											Prep	Tech: ,BockJ	
Work Order, L Sample DateTi	ot, Total ne Amt/Ur		Initial Aliquot Amt/Unit	QC Tracer Prep Date			pt or cometry	Count Time Min		etector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Comments:	PH LZ-0	SS 1-0	7-07				***		- 11			н	
	Att CCO	<u> </u>											
				10% 05	2.5/1	*****	1.00	+ 00			1/12/07	1 7 2	
All Clients fo					1.02	.012 00	CX CX	, 13 60	\- \ <u>-</u> \-	100 C	(11210)	1+1/4	
384868, Pa	cific Northwes	st National	Laboratory	Pacific	North	hwest Nation	al Lab,	SA , 576	71				
	Constituent Li			**************************************	···				·				-
BETA JK72R1AA-BLK:	RDL:4	pCi/L	LCL:	UCL:	RPD:	:							
BETA JK72R1AC-LCS:	RDL:4	pCi/L	LCL:	UCL:	RPD:	<b>:</b>							
	RDL:	pCi/L	LCL:70	UCL:130	RPD:	:20							
JKPLL1AD-SAMP Uncert Le JK72R1AA-BLK:	Calc Info: vel (#s).: 2	Decay t	o SaDt: Y	Blk Subt.:	N	Sci.Not.:	Y C	DRs: B					
Uncert Le	vel (#s).: 2	Decay t	o SaDt: Y	Blk Subt.:	N	Sci.Not.:	Y O	DRs: B					
	vel (#s).: 2	Decay t	o SaDt: Y	Blk Subt.:	N	Sci.Not.:	Y O	DRs: B					
							Approve	d By		The state of the s		Date:	
						•							

STL Richland Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 6 WO Cnt: 6
Prep\_SamplePrep v4.8.26

1/3/2007 3:12:22 PM		Sample F	reparation	on/Analys	is		Polence I	4.4400400700	
384868, Pacific Northwest National Pacific Northwest National Lab		Sr-90 Prp/SepRC50	06(5071)	-			Pipet	d:1120482733	DRM
AnalyDueDate: 01/15/2007		Sr-85 by Nai and Sr CLIENT: HANFORD		7 day ingrow	/th		Sep1 DT/Tm Tec	": V8/17	2:16 PM
Batch: 6345294 WATER	005073 "pCi/L		M, Quote:	SA 57671			Sept DI/Im reci	n: [0[0]	2:51 AM
SEQ Batch, Test: None	p = " =	• •	w, Quote.	JA, 37071			Sep2 DT/Tm Tec		DRY
Work Order, Lot, Total	Initial Aliquot    QC	Tracer Tracer					Prep Tec		
Sample DateTime Amt/Unit		Date Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JKPLL-1-AF J6L020189-1-SAMP	1008.00g,in SRTB14 12/21/0	and MACE	10	001	100	9"	2011	1/8/04 UD	
A COMMISSION OF THE PROPERTY O	09/11/4 		1.0	28.			E . (E. )	<del></del>	***************************************
		T				40_	0881	//6/07>	
	ĒXĪŢŽĠŗŽoùŢ					31	D31	1/17/07	
12/01/2006 11:27	AmtRec: 20ML,8X	LP #Containers: 9	)			Sor:	Alpha: 1.32E-03 uCi/Sa	Beta: -	2.66E-04 uCi/Sa
2 JKPLL-1-AG-X J6L020189-1-DUP	1000.60g,in SRTB14 12/21/0			00 O		3."	2011	18/09 64	
	09/11/0	06.r 2.021Q	*****	23.8			-5		
	YTA16815	0,883,0				4D	0821	1/14/02	
						42	0738	1/17/0	<u>&gt;</u>
12/01/2006 11:27	AmtRec: 20ML,8X	\ 6 A. 7	)			Scr:	Alpha: 1.32E-03 uCi/Sa	Beta: -	2.66E-04 uCi/Sa
3 JK4W7-1-AC J6L080235-1-SAMP	1005.80g,in \$RTB14 12/21/0	6.pd ( ) ( ) ( ) ( ) ( )	1	011		_		.1.	
	09/11/0	A 0000	)	24.1		<u>T</u> '	0524	1/9/2	
		W 0,8888	<del>)</del>			1/4		1/6/07/00	
	Ex-7/23/200	07		***************************************		4:	3 0738	1/17/575	
12/06/2006 11:42	AmtRec: 20ML,3X		rs: 6			Scr:	Alpha: -3.14E-04 uCi/Sa	Beta: 2	2.58E-03 uCi/Sa
4 JK71X-1-AA-B J6L110000-294-BLK	1002.00g,in SRTB14 12/21/0	6,pd 0 0 0 0 0	·	01.0			550/	1-1-	,
	09/11/0	06,r X,033QQ	**********	BY, U	******	37	25.5	1/1/07	
The state of the s		0,8843				15_	137	1/16/07>	
		***************************************				90	J 0/38	1/17/2	
12/01/2006 11:27	AmtRec:	#Containers: 1	······································			Scr:	Alpha:		Beta:
	fi - Final Amt, di - Diluted A				ISV - Insuffic	ient Volume	for Analysis		NO Cnt: 4
Richland Wa. pd - Prep Dt, r -	Reference Dt, ec-Enrichmen	nt Cell, ct-Cocktailed Ad	babb					Prep_	_SamplePrep v4.8.26

1/3/2007 3:12:23 PM		S	Sample Prepa	aration/Ana	alvsis		Ralanas	e Id:112048273	33
			p/SepRC5006(50		,				33
		TL Sr-85 by	Nal and Sr-90 b	y GPC 7 day ir	growth		Pip	oet #:	
AnalyDueDate: 01/15/2007		51 CLIENT:	HANFORD	_			Sep1 DT/Tm To	ech:	
Batch: 6345294 SEQ Batch, Test: None	pCi/L			Auto .			Sep2 DT/Tm To	ech:	
							Prep To	ech: ,BockJ	
Work Order, Lot, Total Sample DateTime Amt/Ui	Initial Aliquo nit Amt/Unit	t QC Tracer Prep Date		Dish Ppt of Size Geom		Detector Id	Count On Off (24hr) Circle		
5 JK71X-1-AC-C	1002.90g,in	SRSG1297	.486 -		_ /00		\		
J6L110000-294-LCS 		12/20/06,pd 09/11/06,r 2,	0465	24	0	571	Obod	1/9/00	<b>&lt;</b> 1
		VIA (6818	1,1265 -	-		10	1034	1/16/50	
		YTA   6818				41)	: /	1/17/0	
		Ex:7/23/2007		****		112	073Y	11 //01	<u> </u>
12/01/2006 11:27	Ar	ntRec: #Cor	ntainers: 1			Scr:	Alpha:		Beta:
							200		
	est National Labo	ratory Pacif	ic Northwest Na	ational Lab	SA 57671				
384868, Pacific Northwe		ratory Pacif	ic Northwest Na	ational Lab,	SA , 57671				
UKPLL1AF-SAMP Constituent 1 Sr-85 RDL:		<u> </u>	ic Northwest Na	sr-90	SA , 57671 RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
384868, Pacific Northwo	List:	:20 UCL:105		**************************************					
384868, Pacific Northwell UKPLL1AF-SAMP Constituent 1 Sr-85 RDL: UK71X1AA-BLK:	List: pCi/L LCL	:20 UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
384868, Pacific Northwood	List: pCi/L LCL	:20 UCL:105	RPD:20	Sr-90	RDL:2				
384868, Pacific Northwood	List:  pCi/L LCL  pCi/L LCL  pCi/L LCL	:20 UCL:105 :20 UCL:105 :20 UCL:105	RPD:20	sr-90 sr-90	RDL: 2	pCi/L	LCL:	UCL:	RPD:
384868, Pacific Northwood  KPLL1AF-SAMP Constituent 1 Sr-85 RDL:  KK71X1AA-BLK: Sr-85 RDL:  KK71X1AC-LCS: Sr-85 RDL:  KKPLL1AF-SAMP Calc Info: Uncert Level (#s):: 2	List: pCi/L LCL pCi/L LCL	:20 UCL:105 :20 UCL:105 :20 UCL:105	RPD:20 RPD:20 RPD:20	Sr-90 Sr-90 Sr-90	RDL: 2	pCi/L	LCL:	UCL:	RPD:
384868, Pacific Northwood  KPLL1AF-SAMP Constituent 1 Sr-85 RDL:  KK71X1AA-BLK: Sr-85 RDL:  KK71X1AC-LCS: Sr-85 RDL:  KKPLL1AF-SAMP Calc Info: Uncert Level (#s):: 2  KK71X1AA-BLK: Uncert Level (#s):: 2	List:  pCi/L LCL  pCi/L LCL  pCi/L LCL	:20 UCL:105 :20 UCL:105 :20 UCL:105 t: Y Blk Subt	RPD:20  RPD:20  RPD:20	Sr-90 Sr-90 Sr-90	RDL: 2 RDL: 2 RDL: 2	pCi/L	LCL:	UCL:	RPD:
384868, Pacific Northwood  KPLL1AF-SAMP Constituent 1 Sr-85 RDL:  KK71X1AA-BLK: Sr-85 RDL:  KK71X1AC-LCS: Sr-85 RDL:  KKPLL1AF-SAMP Calc Info: Uncert Level (#s):: 2  K71X1AA-BLK: Uncert Level (#s):: 2	Decay to SaD	:20 UCL:105 :20 UCL:105 :20 UCL:105 t: Y Blk Subt t: Y Blk Subt	RPD:20  RPD:20  RPD:20  .: N Sci.Nc	Sr-90 Sr-90 Sr-90 Ot.: Y OD	RDL:2 RDL:2 RDL:2 RS: B	pCi/L	LCL:	UCL:	RPD:
384868, Pacific Northwood  KPLL1AF-SAMP Constituent 1 Sr-85 RDL:  KK71X1AA-BLK: Sr-85 RDL:  KK71X1AC-LCS: Sr-85 RDL:  KKPLL1AF-SAMP Calc Info: Uncert Level (#s):: 2  KK71X1AA-BLK: Uncert Level (#s):: 2  KK71X1AC-LCS:	Decay to SaD	:20 UCL:105 :20 UCL:105 :20 UCL:105 t: Y Blk Subt t: Y Blk Subt	RPD:20  RPD:20  RPD:20  .: N Sci.Nc	Sr-90 Sr-90 Sr-90 Ot.: Y OD	RDL:2 RDL:2 RDL:2 RS: B	pCi/L	LCL:	UCL: UCL:130	RPD:
384868, Pacific Northwood  JKPLLIAF-SAMP Constituent 1 Sr-85 RDL:  JK71X1AA-BLK: Sr-85 RDL:  JK71X1AC-LCS: Sr-85 RDL:  JKPLLIAF-SAMP Calc Info: Uncert Level (#s):: 2  JK71X1AA-BLK: Uncert Level (#s):: 2	Decay to SaD	:20 UCL:105 :20 UCL:105 :20 UCL:105 t: Y Blk Subt t: Y Blk Subt	RPD:20  RPD:20  RPD:20  .: N Sci.Nc	Sr-90 Sr-90 Sr-90 Ot.: Y OD	RDL:2  RDL:2  RDL:2  RS: B  RS: B	pCi/L	LCL:	UCL:	RPD:
384868, Pacific Northwood  OKPLLIAF-SAMP Constituent I Sr-85 RDL:  OK71X1AA-BLK: Sr-85 RDL:  OK71X1AC-LCS: Sr-85 RDL:  OKPLLIAF-SAMP Calc Info: Uncert Level (#s):: 2  OK71X1AA-BLK: Uncert Level (#s):: 2	pCi/L LCL pCi/L LCL pCi/L LCL pCi/L LCL Decay to SaD Decay to SaD	:20 UCL:105 :20 UCL:105 :20 UCL:105 t: Y Blk Subt t: Y Blk Subt	RPD:20  RPD:20  RPD:20  .: N Sci.Nc	Sr-90 Sr-90 Sr-90 Ot.: Y OD	RDL:2  RDL:2  RDL:2  RS: B  RS: B	pCi/L	LCL:	UCL: UCL:130	RPD:

Prep\_SamplePrep v4.8.26

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Pacific Northw	fic Northwest N. est National La te: 01/15/2007	b 7 Wこ		San AW Gamma Prp TA Gamma by 5I CLIENT: HA	RC5017 HPGE	aration/An	alysis		Ba Sep1 DT/	lance Id:112048 Pipet #:	2733	
Batch: 6345 SEQ Batch, Tes	299 WATE	R	pCi/L		PM, Q	uote: SA , 57	671		Sep2 DT/		. 1	
									P P	rep Tech: ,Bock	1/APA	<b>+</b>
Work Order, Sample Date		al /Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Or (24hr) Circle	ff CR Ana Init/Da		Comments:
1 JKPLT-1-AC J6L020191-2-SA	MP.		1961.50g,in			100 ml	100	G8	2005	1/15/0	7010	
12/01/2006 07:5			AmtRec: 20	ML,2X500ML,LP,3X4L	P #Containers:			Sc	r: Alpha: 2.41E-0	03 uCi/Sa	Beta: 6.88	E-04 uCi/Sa
2 JKPLT-1-AG-X J6L020191-2-DL	JP	_	1944.10g,ín					47	2151			
12/01/2006 07:5			AmtRec: 20	ML,2X500ML,LP,3X4L	P #Containers:	7			r: Alpha; 2.41E-0	3 uCi/Sa	Beta: 6,88	 E-04 uCi/Sa
3 JK72C-1-AA-B J6L110000-299-	BLK	<b>5</b>	2000.30g,in					G4	2006			
12/01/2006 07:5			AmtRec:	#Containe	ers: 1			Sc.	r: Alpha	a:	 E	 Bela:
4 JK72C-1-AC-C J6L110000-299-	LCS	<b>!</b>	2000.60g,in	qcag1317 12/20/06,pd 03/07/05,r		J	d	G1		b		:
12/01/2006 07:5	9		AmtRec:	#Containe	ers: 1			Sci	r: Alpha	a:	B	Seta:
Comments:	PH 42-	o B	1-8-07									**
All Clients f 384868, F		vest Nati	ional Laboratory	Pacific	Northwest N	ational Lab,	SA , 5767	1				
JKPLT1AC-SAME												
Co-60 Cs-137	RDL:0.00E+00 RDL:6.00E+00			UCL: UCL:130	RPD: RPD:20	Cs-134 Cs-137DA	RDL:0.0	_	i/L LCL:	UCL:	RPD:	
Eu-154	RDL:0.00E+00	pCi,	LCL:	UCL:	RPD:	Eu-155	RDL:6.0	_	i/L LCL:70 i/L LCL:	UCL:130	RPD: RPD:	
K-40	RDL:0.00E+00	) pCi	L LCL:	UCL:	RPD:	Sb-125	RDL:0.0		i/L LCL:	UCL:	RPD:	
JK72C1AA-BLK: Co-60	RDL:0.00E+00	) pCi,	LCL:	UCL:	RPD:	Cs-134	RDL:0.0	00+30 pc	i/L LCL:	UCL:	RPD:	
STL Richland Richland Wa.			- Final Amt, di - Dilu eference Dt, ec-Enric			Page 1	ISV -	Insufficient Vo	olume for Analysis			) Cnt; <b>4</b> mplePrep v4.8.26

14 /0 /0/	107	0.04.40	A 1		ı
11/2/2!	11 1 /	4.37.73	73	l	
11/0/20	$\sim$	9:34:42	771	v	

#### Sample Preparation/Analysis

Balance ld:1120482733

AW	Gamma	PrpRC5017
TA	Gamma	by HPGE

Pipet #: \_\_\_\_

AnalyDueDate: 01/15/2007

51 CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 6345299 SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

					# 100 PER PER PER PER PER PER PER PER PER PER				Pre	p Tech: ,BockJ		
Work Order, Sample DateT		. 11	itial Aliquet Amt/Unit	QC Tracer Prep Date	Dish	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date		Comments:
Cs-137 Eu-154 K-40	RDL:0.00E+00 RDL:0.00E+00 RDL:0.00E+00	pCi/L pCi/L pCi/L	LCL: LCL: LCL:	UCL: UCL: UCL:	RPD: RPD: RPD:	Cs-137DA Eu-155 Sb-125	RDL:6.001 RDL:.00E RDL:0.001	+00 pc	i/L LCL: i/L LCL: i/L LCL:	UCL: UCL: UCL:	RPD: RPD: RPD:	
JK72C1AC-LCS: Cs-137 K-40 RA-228 U-238	RDL:15 RDL:6 RDL: RDL:	pCi/L pCi/L pCi/L pCi/L	LCL:70 LCL:70 LCL:70 LCL:70	UCL:130 UCL:130 UCL:130 UCL:130	RPD:20 RPD:20 RPD:20 RPD:20	Cs-137DA Ra-226 RA-228DA	RDL:15 RDL: RDL:	pC	i/L LCL:70 i/L LCL:70 i/L LCL:70	UCL:130 UCL:130 UCL:130	RPD:2 RPD:2 RPD:2	0
JK72C1AA-BLK: Uncert L JK72C1AC-LCS:	Level (#s).: 2 : Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.: Blk Subt.:	N Sci.Not.	: Y ODR	s: B s: B ş: B					

STL Richland Richland Wa. Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

Approved By \_\_\_\_

WO Cnt: 4
Prep\_SamplePrep v4.8.26

<u>--</u>

í .	PM		Samp	le Prep	paration/Ana	llysis		Balance Id	:1120482733	
384868, Pacific Not	rthwest National L	- · · · · · · · · · · · · · · · · · · ·	W Gamma PrpRC			-		Pipet #		
Pacific Northwest Na			A Gamma by HP					•		
AnalyDueDate: 01	1/15/2007		51 CLIENT: HANF	ORD				Sep1 DT/Tm Tech	:	
Batch: 6345301 SEQ Batch, Test: Nor	WATER	pCi/L		PM, C	Quote: SA , 576	71		Sep2 DT/Tm Tech	;	
ord batton, rest. Nor	16					8 m   1 m m   1 m   1		Prep Tech	: ,BockJ / 🏻	P/A
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JKPLL-1-AE		2500.90g,in			10000	100	^ 1	2152	1/5/070	n2)
J6L020189-1-SAMP 				***************************************			G4		11101	•
12/01/2006 11:27		AmtRec: 20ML	.,8XLP #Conta	iners: 9			Scr:	Alpha: 1.32E-03 uCi/Sa	/Beta:	-2.66E-04 uCi/Sa
2 JK3QJ-1-AA		2502.10g,in		ALIAN CO.			/ .	2607	. /	
J6L080130-1-SAMP					<i>y</i>		46	200 (		
12/05/2006 09:48		AmtRec: 20ML	,3XLP #Conta	iners: 4			Scr:	Alpha: -8.29E-05 uCi/Sa	Beta	1.33E-04 uCi/Sa
JK3QJ-1-AC-X							1 1			
6L080130-1-DUP					-		G8	2153		
12/05/2006 09:48	Parameter Comments Co	AmtRec: 20ML	.,3XLP #Conta	iners: 4			Scr:	Alpha: -8.29E-05 uCi/Sa	Beta	1.33E-04 uCi/Sa
4 JK72H-1-AA-B		2501.00g,in			1000-6		0.7	h 4 ~ ~		
16L110000-301-BLK					(00)	ur-r-uaper.	66	2153		
12/05/2006 09:48	DERTAL DESTRUCTION OF THE PROPERTY OF THE PROP	AmtRec:	#Containers:	1			Scr;	Alpha:		Beta:
5 JK72H-1-AC-C J6L110000-301-LCS	<b> </b>	2500.40g,in	QCAG1319 12/20/06,pd 03/07/05,r	7842222	V	*	G8	2336		
12/05/2006 09:48	Milmay Milmay	AmtRec:	#Containers:	1			Scr:	Alpha:	b	Beta:
	OJ-SAMP "Comme LZ.698	nts. DUP. not poured due Ì− % - ᠪ勹	e to no more sample	. Please re	ecount on diff. dete	ctor. JB 01/08	3/07"			
		tional Laboratory	Pacific No	rthwest	National Lab,	SA , 5767	71			
All Clients for Ba 384868, Pacifi UKPLL1AE-SAMP Cons	ic Northwest Na	tional Laboratory	Pacific No.	rthwest	National Lab,	SA , 5767	71			

rd 1/15/2007 2:06:08 PM Sample Preparation/Analysis Balance Id:2113224201 384868. Pacific Northwest National Laboratory, BN I-129 Prp/SepRC5025 Pacific Northwest National Lab Pipet #: TB Gamma by LEPD 5I CLIENT: HANFORD AnalyDueDate: 01/15/2007 Sep1 DT/Tm Tech: Batch: 6345293 WATER pCi/L PM, Quote: SA, 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None All Tests: 6345293 BNTB. Prep Tech: ,BostedD Work Order, Lot, Total Initial Aliquot QC Tracer Dish Ppt or Count Detector Count On | Off CR Analyst, Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min ld (24hr) Circle Init/Date 1 JKPK0-1-AA 3934.30q,in ITA5904 1906 12 1/17/070R 37.0 100 12/28/06 J6L020186-1-SAMP 12/01/2006 10:55 AmtRec: 20ML.2X4LP #Containers: 3 Scr: Alpha: 3.37E-04 uCi/Sa Beta: 1.24E-03 uCi/Sa 2 JKPK3-1-AA 3905.60a.in ITA5905 37.4 44 1907 12/28/06 J6L020186-2-SAMP 12/01/2006 11:37 AmtRec: 20ML,2X4LP #Containers: 3 Scr: Alpha: 2.32E-04 uCi/Sa Beta: 1,63E-03 uCi/Sa 3 JKPLT-1-AD 3886.40a.in ITA5906 37.4 12/28/06 J6L020191-2-SAMP 12/01/2006 07:59 AmtRec: 20ML.2X500ML.LP.3X4LP #Containers: 7 Scr: Alpha: 2.41E-03 uCi/Sa Beta: 6.88E-04 uCi/Sa 4 JKXXH-1-AC 3945.80g,in ITA5907 37.4 2051 12/28/06 J6L060370-1-SAMP 12 12/04/2006 10:52 AmtRec: 20ML, LP, 2X4LP #Containers: 4 Scr: Alpha: -1.03E-03 uCi/Sa Beta: 1.99E-03 uCi/Sa - TI -07 5 JK4W7-1-AA 3924.50g,in ITA5908 12/28/06 2053 J6L080235-1-SAMP 12/06/2006 11:42 AmtRec: 20ML,3XLP,2X4LP #Containers: 6 Scr Alpha: -3.14E-04 uCi/Sa Beta: 2.58E-03 uCi/Sa 6 JK4W7-1-AD-X 3741.50q,in ITA5909 36,7 12/28/06 LS J6L080235-1-DUP 12/06/2006 11:42 AmtRec: 20ML.3XLP.2X4LP #Containers: 6 Scr: Alpha: -3.14E-04 uCi/Sa Beta: 2.58E-03 uCi/Sa 7 JK71W-1-AA-B 3568.00g,in ITA5910 22 40 14 12/28/06 J6L110000-293-BLK 12/06/2006 11:42 AmtRec: #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 ISV - Insufficient Volume for Analysis WO Cnt: 7 Page 1 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep SamplePrep v4.8.26  $\mathbb{N}$ 

Comments:  11 Clients for Batch: 384868, Pacific Northwest National Laboratory	1/15/2007 2:06	:11 PM			Sar	nple	Prepara	tion/Ana	lysis			Balar	nce ld:211:	3224201	
Sept   Defin   Total   Month of the Annalyst   Comments:												Pipet #:			
### Prop Tech: BostedO    Work Order, Lef.   Arabin   Ara	AnalyDueDate	: 01/15/2007			51 CLIENT: HA	NFOR	RD as					Sep1 DT/Tn	Tech:		
			р	Ci/L				, , , , , , , , , , , , , , , , , , , ,				Sep2 DT/Tm	Tech:		
Work Order, Lot.   Total	oud batch, rest.	NOTE				1			i e i i i e			Prep	Tech: ,Bo	stedD	
SIXTW-LACC   S788.10g.in   ISD0718   1274445pd   160   15   224   1/7/67044   12706705051142   AntRec:   KCombinent 1   Scr.   Apha:   Beta:   E200620051142   AntRec:   E200620051142   AntRec:   KCombinent 1   Scr.   Apha:   Beta:   E200620051142   AntRec:   E200620051142   E200620051142   AntRec:   E200620051142   AntRec:   E200620051142   AntRec:   E200620051142   AntRec:   E200620051142   AntRec:   E200620051142	Work Order, Lo	t, Total					Dish	Ppt or	Cour	nt De	tector	Count On   Off	CR	Analyst,	Comments:
12/14/8,pd		ie    Amt/Un	- 11		<u> </u>				Time N	Vin	ld	(24hr) Circle	<del>''</del>		
Comments:   Scr: Apha: Beta:	J6L110000-293-LC		3/3	88.10g,In	12/14/06,pd		· · · · · · · · · · · · · · · · · · ·	40.8	15	0	L5	2241	1/1	7/07 OK	7
Il Clients for Batch:     384868, Pacific Northwest National Laboratory	12/06/2006 11:42			AmtRec:	#Contain	ers: 1	3.42				Scr:	Alpha:			Beta:
384869, Pacific Northwest National Laboratory Pacific Northwest National Lab, SA, 57671  KCPKOLAA-SAME Constituent List: 1-129	Comments:														
384869, Pacific Northwest National Laboratory Pacific Northwest National Lab, SA, 57671  KCPKOLAA-SAME Constituent List: 1-129															
384869, Pacific Northwest National Laboratory Pacific Northwest National Lab, SA, 57671  KCPKOLAA-SAME Constituent List: 1-129					ε										
384869, Pacific Northwest National Laboratory Pacific Northwest National Lab, SA, 57671  KCPKOLAA-SAME Constituent List: 1-129															
384869, Pacific Northwest National Laboratory Pacific Northwest National Lab, SA, 57671  KCPKOLAA-SAME Constituent List: 1-129															
Comparison   Com															
I-129 RDL:1.00E+00 pCi/L LCL: UCL: RPD:  KYINHAA-BLR:  I-129 RDL:1.00E+00 pCi/L LCL: UCL: RPD:  KYINHAA-LCS:  I-129 RDL:5 pCi/L LCL:70 UCL:130 RPD:20  KPK01AA-SAMP Calc Info: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  KYINHAA-BLR: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  TYINHAC-LCS: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  Approved By Date:				haboratory	Pacific	North	west Natio	onal Lab,	SA,	57671					
Note   Color				LCL:	UCL:	RPD:									
X71M1AC-LCS: 1-129 RDL:5 pci/L LCL:70 UCL:130 RPD:20  CPKOLAA-SAMP Calc Info:    Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  C71M1AA-BLK:    Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  C71M1AC-LCS:    Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  Approved By	JK71W1AA-BLK: I-129	2DT.+1 00E+00		T.CT.	HCT.										
Notert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  VIWIAN-BLK: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  VIWIAC-LCS: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  Approved By	JK71W1AC-LCS:														
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  (7(1)MIAA-BLK: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  (7(1)MIAC-LCS: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  Approved By			pCi/L	LCL:70	UCL:130	RPD:	20								
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  K71W1AC-LCS:  Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  Approved By	Uncert Lev		Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.	T OD	Rs: B						
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  Approved By Date:	Uncert Lev	rel (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.	Y OD	Rs: B						
		rel (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.	Y OD	Rs: B						
								Approved	Ву				D	ate:	
	•														
						tenen menerale		Name of the Control o							
STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ISV - Insufficient Volume for Analysis WO Cnt: 8  Richland Wa. pd - Prep Dt. r - Reference Dt. ec-Enrichment Cell ct-Cocktailed Added								e 2		ISV - Insuffi	cient Volu	ime for Analysis			

1/8/2007 8:50:47 AM 384868, Pacific Northwest National Lat		Sample Prepa	ration/Ana	lysis		Balance le	d:1120482733			
L Pacific Monthwest Mational Lab		Prp/SepRC5065	A.1.		Pipet #:					
AnalyDuoData: 01/15/2007	55 Fechne 51 CLIENT	etium-99 by Liquid F: HANFORD	Scint		Sep1 DT/Tm Tech:					
Ratch: 6345203 WATER	05073 STOLLEN		-104 570	<b>4</b>	- · · · · · · · · · · · · · · · · · · ·					
SEQ Batch, Test: None	pCi/L	PIVI, QU	ote: SA , 576	/1	Sep2 DT/Tm Tech:					
AnalyDueDate: 01/15/2007  Batch: 6345303 WATER SEQ Batch, Test: None					Prep Tech: ,BockJ					
Work Order, Lot,   Total Amt	Total Initial Aliquot cidified/Unit Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
1 JKPLR-1-AA	125.30g,in	125.30g		60		***************************************				
J6L020191-1-SAMP	****									
12/01/2006 11:27	AmtRec: 20ML,2X500MLP	#Containers: 3			Scr:	Alpha: -3.66E-05 uCi/Sa	Beta: 1.3	9E-05 uCi/Sa		
2 JKPLT-1-AE	125.10g,in	125.10g						······································		
J6L020191-2-SAMP										
12/01/2006 07:59	AmtRec: 20ML,2X500ML,LI	<sup>2</sup> ,3X4LP #Containers: 7			Scr:	Alpha: 2.41E-03 uCi/\$a	Beta: 6.8	8E-04 uCi/\$a		
3 JKX0A-1-AA	125.40g,in	125.40g						***************************************		
J6L060373-1-SAMP										
12/04/2006 12:47	AmtRec: 20ML,500MLP	#Containers: 2			Scr:	Alpha: -6.93E-05 uCi/Sa	Beta: 1.2	8E-04 uCi/Sa		
4 JKX0A-1-AC-X	125.90g,in	125.90g						<u> </u>		
J6L060373-1-DUP										
12/04/2006 12:47	AmtRec: 20ML,500MLP	#Containers: 2		-	Sor:	Alpha: -6.93E-05 uCi/Sa	Beta: 1.2	8E-04 uCi/Sa		
5 JKX0E-1-AE	125.20g,in	125.20g			· · · · · · · · · · · · · · · · · · ·					
J6L060373-2-SAMP				; ;						
12/04/2006 10:32	AmtRec: 20ML,500MLP,2XI	LP #Containers: 4		- * * * * * * * * * * * * * * * * * * *	Scr:	Alpha: -1.67E-04 uCi/Sa	Beta: 8.1	2E-05 uCi/Sa		
6 JKX0E-1-AF-S	125.80g,in	125.80g	tcsg1736	:						
J6L060373-2-MS			12/06/06,pd 01/10/06,r	:						
12/04/2006 10:32	AmtRec: 20ML,500MLP,2X	LP #Containers: 4			Scr:	Alpha: -1.67E-04 uCi/Sa	Beta: 8.1	2E-05 uCi/Sa		
7 JK72J-1-AA-B	125.00g,in	125.00g								
J6L110000-303-BLK				Ą						
12/04/2006 12:47	AmtRec: #C	Containers: 1		***************************************	Scr:	Alpha:		Beta:		
			-				***************************************			
1	i - Final Amt, di - Diluted Amt, s1 eference Dt, ec-Enrichment Cell, c	·	Page 1	ISV - In	sufficient Volur	ne for Analysis		O Cnt: <b>7</b> SamplePrep v4.8.		

1/8/2007 8:50:48 AM		FP Tc-99 P	Sample Preparp/SepRC5065 ium-99 by Liquid		lysis		Balance Id:1120482733  Pipet #:		
AnalyDueDate: 01/15/2007		51 CLIENT	HANFORD				Sep1 DT/Tm Te	ch:	
Batch: 6345303 SEQ Batch, Test: None									
·							Prep Te	ch: ,BockJ	
Work Order, Lot,   Total Amt Sample Date /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments
8 JK72J-1-AC-C		125.60g,in	125.60g	tcse2045 12/20/06,pd	60	<del>!!</del>	II.	<u>L</u>	
6L110000-303-LCS 	7TY 7 3 8 8 7 9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	************		01/10/06,r		~~~ <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>			***********
12/04/2006 12:47	AmtRe	ec: #Co	ntainers: 1			Scr:	Alpha:		Beta:
JK72J-1-AD-BN					·				
:6L110000-303-IBLK		************	*****	****		~~~~~~~~~~~~~~~~~			***************************************
12/04/2006 12:47	AmtRe	ec: #Co	ntainers: 1			Scr.	Alpha:		Beta:
comments: PH CZO	951-8-07								
ll Clients for Batch:	:								
## € 2.0  Il Clients for Batch: 384868, Pacific Northwe	st National Laborat	tory Pacif	ic Northwest Na	tional Lab,	SA , 57671				
∀ H C Z.⊙	st National Laborat		ic Northwest Na	tional Lab,	SA , 57671				
TC-99 RDL:15	st National Laborat	1800		tional Lab,	SA , 57671				
TC-99 RDL:15 KX0E1AA-BLK:	st National Laboratist: pCi/L LCL:76	0 UCL:130	RPD:20	tional Lab,	SA , 57671				
Clients for Batch:  384868, Pacific Northwe  CPLRIAA-SAMP Constituent L TC-99 RDL:15  CX0E1AF-MS:  C72JIAA-BLK: TC-99 RDL:15  C72JIAC-LCS: TC-99 RDL:15  C72JIAD-IBLK: TC-99 RDL:15	st National Laboratist: pCi/L LCL:76	0 UCL:130	RPD:20	tional Lab,	SA , 57671				
1 Clients for Batch: 384868, Pacific Northwe  CPLRIAA-SAMP Constituent L TC-99 RDL:15  CX2JIAA-BLK: TC-99 RDL:15  CX2JIAC-LCS: TC-99 RDL:15  CX2JIAD-IBLK: TC-99 RDL:15  CX2JIAD-IBLK: TC-99 RDL:15  CYPLRIAA-SAMP Calc Info: Uncert Level (#s).: 2	st National Laboratist:  pCi/L LCL:70  pCi/L LCL:  pCi/L LCL:	UCL: 130 UCL: 0 UCL: 130 UCL: 130	RPD:20  RPD:  RPD:20  RPD:		SA , 57671				
Il Clients for Batch:  384868, Pacific Northwe  RPLRIAA-SAMP Constituent L TC-99 RDL:15  KX0E1AF-MS:  K72JIAA-BLK: TC-99 RDL:15  K72JIAC-LCS: TC-99 RDL:15  K72JIAD-IBLK: TC-99 RDL:15  K72JIAA-SAMP Calc Info: Uncert Level (#s).: 2  KX0E1AF-MS: Uncert Level (#s).: 2	st National Laboratist: pCi/L LCL:70 pCi/L LCL: pCi/L LCL:70 pCi/L LCL:70	UCL: UCL: UCL: UCL: UCL: UCL:	RPD:20  RPD:  RPD:20  RPD:	t.: Y ODI					
Il Clients for Batch:  384868, Pacific Northwe  RPLRIAA-SAMP Constituent L Tc-99 RDL:15  KXOE1AF-MS:  K72JIAA-BLK: Tc-99 RDL:15  K72JIAC-LCS: Tc-99 RDL:15  K72JIAD-IBLK: Tc-99 RDL:15  K72JIAD-IBLK: Tc-99 RDL:15  K72JIAD-IBLK: Tc-99 RDL:15  KYLRIAA-SAMP Calc Info: Uncert Level (#s):: 2  KXOE1AF-MS: Uncert Level (#s):: 2  K72JIAA-BLK: Uncert Level (#s):: 2	st National Laboratist: pCi/L LCL:70 pCi/L LCL: pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:	UCL: UCL: UCL: UCL: UCL: UCL: UCL:	RPD:20  RPD:  RPD:20  RPD:  N Sci.No.	t.: Y ODI	Rs: B				
Il Clients for Batch:  384868, Pacific Northwe  KPLRIAA-SAMP Constituent L TC-99 RDL:15  KXOE1AF-MS:  K72JIAA-BLK: TC-99 RDL:15  K72JIAC-LCS: TC-99 RDL:15  K72JIAD-IBLK: TC-99 RDL:15  K72JIAD-IBLK: TC-99 RDL:15  KYZLIAA-SAMP Calc Info: Uncert Level (#s):: 2  KXOE1AF-MS: Uncert Level (#s):: 2  KXOE1AF-MS:	st National Laboratist:    pCi/L LCL:76    pCi/L LCL:    pCi/L LCL:76    pCi/L LCL:76    pCi/L LCL:76    pCi/L LCL:76    pCi/L LCL:76    pCi/L LCL:76	UCL: UCL: UCL: UCL: UCL: UCL: V Blk Subt V Blk Subt	RPD:20  RPD:  RPD:20  RPD:  N Sci.No  N Sci.No	t.: Y ODI	Rs: B				

Prep\_SamplePrep v4.8.26

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Pacific Northwest Na	36 AM thwest National Laborational Lab	S6 Tritin	Sample Pr Prp/SepRC5007 um by Liquid Sci NT: HANFORD	eparation/A	nalysis	Soci	Balance Id:   120   Pipet #:   12 -	145 2956stm
AnalyDueDate: 01  Batch: 6345297  SEQ Batch, Test: Non	WATER e	pCi/L		, Quote: SA , 5	7671		o2 DT/Tm Tech:	000044
							Prep Tech:	
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JKPLL-1-AA								
J6L020189-1-SAMP								
12/01/2006 11:27	A CONTRACTOR OF THE CONTRACTOR	AmtRec: 20ML.8XLP	#Containers: 9			Scr:	Alpha:	Beta:
2 JKPLT-1-AA							rapout	Deta.
J6L020191-2-SAMP								
						**************************************		
12/01/2006 07:59		AmtRec: 20ML,2X500M	L,LP,3X4LP #Contair	ners: 7		Scr:	Alpha:	Beta:
3 JKXXH-1-AA								
J6L060370-1-SAMP {		**	*****					
12/04/2006 10:52		AmtRec: 20ML,LP,2X4L	P #Containers: 4	,		Scr:	Alaba	D-1
4 JKX0E-1-AA		Antitico, Zome, et , ZA4L	T #OURIAINETS.	•		SG.	Alpha:	Beta:
J6L060373-2-SAMP								
			**************************************			***************************************		
12/04/2006 10:32		AmtRec: 20ML,500MLP	2XLP #Containers	s: 4		Scr:	Alpha:	Beta:
5 JKX06-1-AA								
J6L060376-1-SAMP 					************			
12/05/2006 11:46		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
6 JKX06-1-AC-X		7 10 10 0 . LUME, E1	n Comanicis. L	:		JGI.	тирист .	ogia.
J6L060376-1-DUP								
			**************************************					
12/05/2006 11:46		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
7 JKX07-1-AA								
J6L060376-2-SAMP	[ ] ]							
12/05/2006 10:48	MACHINE MACHIN MACHINE MACHINE MACHINE MACHINE MACHINE MACHINE MACHINE MACHINE	AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
		Americo. 201911,LF	#OUNTAINERS, Z			JUI.	AIPITA.	Deta.
STL Richland Ke	y: In - Initial Amt, fi - Fi	nal Amt, di - Diluted Amt,	s1 - Sep1, s2 - Sep2	2 Page 1	ISV - I	nsufficient Volume for A	nalysis	WO Cnt: 7
Richland Wa.	pd - Prep Dt, r - Refere	ence Dt, ec-Enrichment Ce	II. ct-Cocktailed Add	led				ICOC v4.

12/1.1/2006 11:13:36 AM		Sample Pre	eparation/A	nalysis		Balance Id:		
384868, Pacific Northwest National Laboratory , Pacific Northwest National Lab		p/SepRC5007 n by Liquid Scir				Pipet #:		
AnalyDueDate: 01/15/2007		T: HANFORD	11		Sep1 DT/Tm Tech:			
Batch: 6345297 WATER pCi/L		PM,	Quote: SA , 5	7671	Sep2 DT/Tm Tech:			
SEQ Batch, Test: None						Prep Tech:		
Work Order, Lot,   Total   In	itial Aliquot	QC Tracer	Count	Detector	Count On J Off	CR Analyst,	Comments:	
Sample DateTime Amt/Unit	Amt/Unit	Prep Date	Time Min	ld	(24hr) Circle	Init/Date	Comments.	
8 JK30K-1-AA								
6L080158-1-SAMP 			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			## ###################################		
12/06/2006 09:48 An	ntRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:	
9 JK716-1-AA-B					N. C.	· · · · · · · · · · · · · · · · · · ·		
J6L110000-297-BLK								
12/05/2006 11/45			**************************************					
12/05/2006 11:46 An 0 JK716-1-AC-C	ntRec: #0	Containers: 1			Scr:	Alpha:	Beta:	
96L110000-297-LCS								
			***************************************				~~~~	
	ntRec: #0	Containers: 1			Scr:	Alpha:	Beta:	
1 JK716-1-AD-BX								
6L110000-297-MBLK 			·					
12/05/2006 11:46 An	ntRec: #0	Containers: 1			Scr:	Alpha	Data	
2 JK716-1-AE-CM	na too.	PORTUNICIS. 1				Alpha:	Beta:	
I6L110000-297-MLCS								
10000000000000000000000000000000000000		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	**					
12/05/2006 11:46 An	ntRec: #0	Containers: 1			Scr:	Alpha:	Beta:	
3 JK716-1-AF-BN								
6L110000-297-  B上K 		********				·		
12/05/2006 11:46 An	ntRec: #0	Containers: 1			Scr:	Alpha:	Beta:	
4 JK716-1-AG-BN								
6L110000-297-IBLK								
				We described to the control of the c			***************************************	
12/05/2006 11:46 An	ntRec: #0	Containers: 1			Scr:	Alpha:	Beta:	
STL Richland Key: In - Initial Amt, fi - Final Amt,	di - Diluted Amt. s1	- Sep1, s2 - Sep2	Page 2	ISV - I	nsufficient Volume for A	nalvsis	WO Cnt: 14	
Richland Wa. pd - Prep Dt, r - Reference Dt, e			_				ICOC v4.8.2	

12/11/2006 11:13:38 AM			Sample	Preparation	/Analysis		Balance Id:	
			-3 Prp/SepRC5		•		Pipet #:	
			itium by Liquid				-	
AnalyDueDate: 01/15/2007		51 CI	LIENT: HANFO	RD		Se	p1 DT/Tm Tech:	
Batch: 6345297	pCi/L					Se	p2 DT/Tm Tech:	
SEQ Batch, Test: None							Prep Tech:	
187-3: Order Let 11 To	1	1 - 247 - 1 A I2	11 00 =				-	
Work Order, Lot, To Sample DateTime Amt		Initial Aliquot Amt/Unit	QC Tracer Prep Date		Detector 1d	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 JK716-1-AH-BN								······································
J6L110000-297-IBLK								
		~~~~~~	P 25 40 40 40 40 50 50 50 50 50 50 50 50 50 50 50 50 50				***************************************	
12/05/2006 11:46		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
Comments:								
ll Clients for Batch:	-							
384868, Pacific Northwe	st National Lab	orstorv	Pacific Nort	hwest National	Lab, SA, 5767.	1		
		,01.0.021	1001110 11011	HWEST HELLOWING	Hally Bre y Usus.	1		
KPLL1AA-SAMP Constituent L	Lst:					,		
H-3 RDL:400		L:70 UC	L:130 RPD	:20				
K7161AA-BLK:								
H-3 RDL:400	pCi/L LC	L: UC	L: RPD	· <b>:</b>				
K7161AC-LCS: H-3 RDL:400	pCi/L LC	· · · · · · · · · · · · · · · · · · ·	תממ מפויי	·- ^ ^				
K7161AD-MBLK:	DCT/T TY	L:70 UC	L:130 RPD	20				
H-3 RDL:400	pCi/L LC	L: UC	L: RPD	):				
K7161AE-MLCS:	<b>*</b>		<del>-</del>	•				
H-3 RDL:400	pCi/L LC	L:70 UC	L:130 RPD	:20				
K7161AF-IBLK:								
H-3 RDL:400	pCi/L LC	L: UC	L: RPD	f <b>:</b>				
TK7161AG-IBLK: H-3 RDL:400				<b>.</b>				
H-3 RDL:400 FK7161AH-IBLK:	pCi/L LC	L: UC	L: RPD	· <b>*</b>				
H-3 RDL:400	pCi/L LC	L: UC	L: RPD	1:				
KPLL1AA-SAMP Calc Info:	•							
Uncert Level (#s).: 2	Decay to Sa	Dt: Y Bl	k Subt.: N	Sci.Not.: Y	ODRs: B		*	
K7161AA-BLK:	<b>,</b>				-			
Uncert Level (#s).: 2	Decay to Sa	Dt: Y Bl	k Subt.: N	Sci.Not.: Y	ODRs: B			
K7161AC-LCS:								
Uncert Level (#s).: 2 K7161AD-MBLK:	Decay to Sa	Dt: Y B1	k Subt.: N	Sci.Not.: Y	ODRs: B			
Uncert Level (#s).: 2	Decay to Sa	.n+• v =11	k Subt.: N	Sci.Not.: Y	ODRs: B			
K7161AE-MLCS:	Decay to bu	DC. 1 B1.	n bubli. H	BCL.MOC 1	ODRA. D			
Uncert Level (#s) .: 2								
0110010 10101 (#3):: 2	Decay to Sa	Dt: Y Bl	k Subt.: N	Sci.Not.: Y	ODRs: B			
			0 - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian - Marian -					WO 0 1 48
STL Richland Key: In - Initial	Decay to Sa  Amt, fi - Final Am  Ot, r - Reference Di	t, di - Diluted Am	nt, s1 - Sep1, s2 -	Sep2 Page 3		Insufficient Volume for A	Analysis	WO Cnt: <b>15</b> ICOC v4.8

#### 1/5/2007 12:14:52 PM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory, DH UNat Laser PrpRC5015 Pipet #: Pacific Northwest National Lab SS Total Uranium by KPA AnalyDueDate: 01/15/2007 51 CLIENT: HANFORD Sep1 DT/Tm Tech: Batch: 6345304 PM, Quote: SA, 57671 uq/L Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,BockJ Work Order, Lot. Total Initial Aliquot QC Tracer Count Detector Count On | Off CR Analyst. Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Time Min ld (24hr) Circle Init/Date 1 JKPLR-1-AC 25.70g,in J6L020191-1-SAMP AmtRec: 20ML,2X500MLP #Containers: 3 Scr: Alpha: -3.66E-05 uCi/Sa Beta: 1.39E-05 uCi/Sa 2 JKPLR-1-AD-X 26.10a.in J6L020191-1-DUP AmtRec: 20ML,2X500MLP #Containers: 3 Alpha: -3.66E-05 uCi/Sa Beta: 1.39E-05 uCi/Sa 3 JKPLT-1-AF 25.40q,in J6L020191-2-SAMP 12/01/2006 07:59 AmtRec: 20ML,2X500ML,LP,3X4LP #Containers: 7 Scr: Alpha: 2,41E-03 uCi/Sa Beta: 6.88E-04 uCi/Sa 4 JKPLT-1-AH-S 25.90g,in UNSF3522 12/18/06.pd J6L020191-2-MS 12/01/2006 07:59 AmtRec: 20ML.2X500ML.LP.3X4LP #Containers: 7 Scr: Alpha: 2.41E-03 uCi/Sa Beta: 6.88E-04 uCi/Sa 5 JK72M-1-AA-B 25.50g,in J6L110000-304-BLK 12/01/2006 11:27 AmtRec: #Containers: 1 Scr: Alpha: Beta: 6 JK72M-1-AC-C 25.70g,in UNSF3523 12/18/06,pd J6L110000-304-LCS 03/22/05,r 12/01/2006 11:27 AmtRec: #Containers: 1 Scr: Alpha: Beta: 7 JK72M-1-AD-C 25.40g,in UNSC1453 12/18/06,pd J6L110000-304-LCS 04/28/06,r 12/01/2006 11:27 AmtRec: #Containers: 1 Scr: Alpha: Beta:

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep\_SamplePrep v4.8.26

STL Richland

Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

1/5/2007 12:14:54 P	M	1 1	4:54	2:1	1	07	'20	/5	1	į
---------------------	---	-----	------	-----	---	----	-----	----	---	---

#### Sample Preparation/Analysis

Balance Id:1120482733

Prep Tech: ,BockJ

DΗ	<b>UNat</b>	Laser	PrpR	C5018
SS	Total	Uraniu	m by	KPA

Pipet #: \_\_\_\_

AnalyDueDate: 01/15/2007

51 CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 6345304 SEQ Batch, Test: None

ug/L

Sep2 DT/Tm Tech:

Work Order, Lot, Sample DateTime Amt/Unit Prep Date Time Min Id (24hr) Circle Init/Date

Comments: PH ( 2.0 93 1-5-07

All Clients 384868,	for Batch: Pacific Northwes	t National	Laboratory	Pacific	Northwest National Lab, SA, 57671
JKPLR1AC-SAM	P Constituent Li	st:	<u> </u>		
Uranium JKPLT1AH-MS:	RDL:1.44E-01	ug/L	LCL:	UCL:	RPD:
JK72M1AA-BLK	:				
Uranium	RDL:1.44E-01	ug/L	LCL:	UCL:	RPD:
JK72M1AC-LCS	:				
Uranium	RDL:0.144343	ug/L	LCL:70	UCL:130	RPD:20
JK72M1AD-LCS	:				
Uranium	RDL:0.144343	ug/L	LCL:70	UCL:130	RPD:20
JKPLR1AC-SAM	P Calc Info:				
Uncert	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt .:	N Sci.Not.: Y ODRs: B
JKPLT1AH-MS:					
Uncert	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.Not.: Y ODRs: B
JK72M1AA-BLK	:				
ŀ	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.Not.: Y ODRs: B
JK72M1AC-LCS					
	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.Not.: Y ODRs: B
JK72M1AD-LCS					
Uncert	Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.Not.: Y ODRs: B
					Approved By Date:

Page 2

STL Richland Richland Wa. Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep\_SamplePrep v4.8.26

如/22/2007 12:01:17 PM Sample Preparation/Analysis Balance Id: 坩384868, Pacific Northwest National Laboratory , 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION Pipet #: Pacific Northwest National Lab IZ COLIFORM BY METHOD 9223 5I CLIENT: HANFORD Sep1 DT/Tm Tech: AnalyDueDate: 01/19/2007 Batch: 6345295 WATER PM, Quote: SA, 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: Initial Aliquot QC Tracer Count On | Off Comments: Work Order, Lot. Total Count CR Analyst. Detector Prep Date Amt/Unit (24hr) Circle Sample DateTime Amt/Unit Time Min Init/Date 1 JKXVD-1-AA J6L060355-1-SAMP 12/05/2006 13:59 AmtRec: 20ML 500MLP #Containers: 2 Scr: Alpha: 2.52E-05 uCi/Sa Beta: 3.40E-05 uCi/Sa 2 JKXVG-1-AA J6L060355-2-SAMP 12/05/2006 13:16 AmtRec: 20ML,500MLP #Containers: 2 Scr: Alpha: 5.77E-05 uCi/Sa Beta: -1.32E-05 uCi/Sa 3 JKXVK-1-AA J6L060355-3-SAMP AmtRec: 20ML.500MLP #Containers: 2 Scr: Alpha: -2.51E-05 uCi/Sa Beta: 4.39E-06 uCi/Sa 4 JKXVM-1-AA J6L060355-4-SAMP 12/05/2006 10:25 AmtRec: 20ML,500MLP #Containers: 2 Alpha: 3.38E-05 uCi/Sa Beta: 4.43E-06 uCi/Sa 5 JKXVQ-1-AA J6L060355-5-SAMP 12/05/2006 11:12 AmtRec: 20ML,500MLP #Containers: 2 Scr: Alpha: 2.20E-05 uCi/Sa Beta: 4.41E-06 uCi/Sa 6 JKXVQ-1-AC-X J6L060355-5-DUP 12/05/2006 11:12 Alpha: 2.20E-05 uCi/Sa Beta: 4.41E-06 uCi/Sa AmtRec: 20ML.500MLP #Containers: 2 Scr: 7 JK710-1-AA-B J6L110000-295-BLK 12/05/2006 13:59 Scr: Alpha: Beta: AmtRec: #Containers: 1 WO Cnt: 7 STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis ICOC v4.8.26 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

	PM			ld:							
				8 NO SAMPLE PR	Pipe	Pipet #:					
i AnalyDueDate: 01/1	19/2007			Z COLIFORM BY 1 II CLIENT: HANFO			Sep1 DT/Tm Tech:				
Batch: 6345295	13/2001	***************************************							p2 DT/Tm Te		
SEQ Batch, Test: None								50			
									Prep Te		
Work Order, Lot, Sample DateTime	Total Amt/Ui	11	tial Aliquot .mt/Unit	t QC Trace Prep Date		Detect Id		ount On Off (24hr) Circle		R Analyst. Init/Date	Comments
8 JK710-1-AC-C											
J6L110000-295-LCS 							**		***************************************		
12/05/2006 13:59	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Amt	tRec:	#Containers: 1				Scr:	Alpha:		Beta:
Comments:		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s									
All Clients for Bat 384868, Pacific		N		Dani (2) - 11		r -1 02	FD C71				
364606, PACILIC	: MOTITIMEST	National Labor	acory	Pacific Nor	chwest National		3/0/I				
						Dab, SA,					
JKXVD1AA-SAMP Const	tituent Lis	t:	MANAGE TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREET THE STREET TO THE STREET TO THE STREET TO THE STREET TO THE STREE			nan, on ,	-	AND MAINE			
	tituent Lis	t:				Dab, SA,	-				
JK7101AA-BLK:	tituent Lis	t:				Jab, SA,		AV-T-RELIANCE WHEN			· · · · · · · · · · · · · · · · · · ·
JK7101AA-BLK:	tituent Lis	·				Jab, SA,					· · · · · · · · · · · · · · · · · · ·
JK7101AA-BLK: JK7101AC-LCS:		t:				Tab, SA,					:
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level (	Info:	Decay to SaDt	:: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					:
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level (	Info: (#s).: 2										
JK7101AA-BLK:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS:  JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK:  JK7101AC-LCS:  JKXVD1AA-SAMP Calc  Uncert Level ( JK7101AA-BLK:  Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS:  JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS:	Info: (#s).: 2 (#s).: 2	Decay to SaDt	: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B				Date:	
JK7101AA-BLK: JK7101AC-LCS: JKXVD1AA-SAMP Calc Uncert Level ( JK7101AA-BLK: Uncert Level ( JK7101AC-LCS: Uncert Level (	Info: (#s).: 2 (#s).: 2	Decay to SaDt Decay to SaDt	:: Y	Blk Subt.: N	Sci.Not.: Y Sci.Not.: Y A	ODRs: B ODRs: B		ient Volume for		Date:	WO Cnt: 8

1/22/2007 11:52:50 AM		Sample Pre	eparation/A	nalysis		Balance Id:	
384868, Pacific Northwest National Laboratory Pacific Northwest National Lab		SAMPLE PREPAR		RMED / DIRECT	INJECTION	Pipet #:	
AnalyDueDate: 01/19/2007		ENT: HANFORD				Sep1 DT/Tm Tech:	
Batch: 7022272 WATER SEQ Batch, Test: None		PM,	Quote: SA , !	57671		Sep2 DT/Tm Tech:	
						Prep Tech:	
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   C (24hr) Circli		Comments:
1 JK317-1-AA	**************************************		7				
J6L080160-1-SAMP							
12/06/2006 13:14	AmtRec: 20ML,500ML	#Containers: 2			Scr:	Alpha: 5.10E-05 uCi/Sa	Beta: -5.45E-05 uCi/Sa
2 JK317-1-AC-X							
J6L080160-1-DUP							
12/06/2006 13:14	AmtRec: 20ML,500ML	#Containers: 2		·	Scr:	Alpha: 5.10E-05 uCi/Sa	Beta: -5.45E-05 uCi/Sa
3 JM6RE-1-AA-B							
J7A220000-272-BLK	**********************				******		
12/06/2006 13:14	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
4 JM6RE-1-AC-C						N. I	
J7A220000-272-LCS 	~~~						
12/06/2006 13:14	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
Comments:							
All Clients for Batch: 384868, Pacific Northwest National La	aboratory I	Pacific Northwes	t National La	b, SA , 57671			
JK3171AA-SAMP Constituent List:							
JM6RE1AA-BLK:							
JM6RE1AC-LCS:							
JK3171AA-SAMP Calc Info:				\$			
STL Richland Key: In - Initial Amt, fi - Final A				ISV - 1	nsufficient Volum	e for Analysis	WO Cnt: 4 ICOC v4.8.26
Richland Wa. pd - Prep Dt, r - Reference	Di, ec-⊑nπcnment C	eii, ct-Cocktailed Add	ieu				1000 14.6.20

1/22/2007 11:52:51 AM	5	Sample Preparation/	Analysis	В	alance Id:		
		IPLE PREPARATION PERF RM BY METHOD 9223	FORMED / DIRECT INJECTION	ON	Pipet #:	×i	
AnalyDueDate: 01/19/2007					Sep1 DT/Tm Tech:		
Batch: 7022272 SEQ Batch, Test: None		-		Sep2 DT	/Tm Tech:		
			######################################	F	Prep Tech:		
Work Order, Lot, Total Sample DateTime Amt/Unit	£	QC Tracer Count Prep Date Time Min		On   Off ) Circle	CR Analyst, Init/Date	Comments:	
Uncert Level (#s).: 2 Decay	to SaDt: Y Blk Sub	t.: N Sci.Not.: Y	ODRs: B				
Uncert Level (#s).: 2 Decay	to SaDt: Y Blk Sub	t.: N Sci.Not.: Y	ODRs: B				
Uncert Level (#s).: 2 Decay	to SaDt: Y Blk Sub	t.: N Sci.Not.: Y	ODRs: B				
		Appr	oved By		Date:		

1/16/2007 8:32:31 AM

# ICOC Fraction Transfer/Status Report ByDate: 1/16/2006, 1/21/2007, Batch: '6345306', User: \*ALL Order By DateTimeAccepting

Q Batch Worl	k Ord CurStat	us Ad	cepting		Comments
6345306	and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t		**************************************		
AC	CalcC	BockJ	1/9/2007 1:35:2	24 PM	
SC		wagarr	isBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC		BockJ	InPrep	1/9/2007 1:35:24 PM	RICH-RC-5016 Revision 6
SC		BockJ	Prep1C	1/9/2007 1:39:56 PM	RICH-RC-5014 REVISION 6
SC		AshworthA	InPrep2	1/11/2007 11:57:05 AM	RICH-RC-5014 REVISION 6
SC .		AshworthA	Prep2C	1/12/2007 1:48:57 PM	RICH-RC-5014 REVISION 6
SC		DAWKINSO	InCnt1	1/12/2007 3:16:55 PM	RICH-RD-0003 REVISION 4
SC		DAWKINSO	CalcC	1/12/2007 8:47:09 PM	RICH-RD-0003 REVISION 4
4C		BockJ	1/9/2007 1:39:5	56 PM	
AC		AshworthA	1/11/2007 11:5	7:05	
4C		AshworthA	1/12/2007 1:48	:57 PM	
4C		DAWKINSO	1/12/2007 3:16	:55 PM	
AC		DAWKINSO	1/12/2007 8:47	:09 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

STL RICHLAND

Page 1

Grp Rec Cnt:6 ICOCFractions v4.8.26 1/16/2007 8:29:17 AM

### ICOC Fraction Transfer/Status Report ByDate: 1/16/2006, 1/21/2007, Batch: '6345308', User: \*ALL Order By DateTimeAccepting

Q Batch Work O	rd CurStat	us Ad	cepting		Comments
6345308			THE RESERVE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF		
4 <i>C</i>	CalcC	BockJ	1/9/2007 1:29:4	6 PM	
SC ·		wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC		BockJ	InPrep	1/9/2007 1:29:46 PM	RICH-RC-5016 Revision 6
SC		BockJ	Prep1C	1/9/2007 1:35:10 PM	RICH-RC-5014 REVISION 6
SC		AshworthA	InPrep2	1/11/2007 11:57:14 AM	RICH-RC-5014 REVISION 6
SC		AshworthA	Prep2C	1/12/2007 1:48:39 PM	RICH-RC-5014 REVISION 6
SC		DAWKINSO	InCnt1	1/12/2007 1:58:59 PM	RICH-RD-0003 REVISION 4
SC		DAWKINSO	CalcC	1/12/2007 5:26:40 PM	RICH-RD-0008 REVISION 4
4C		BockJ	1/9/2007 1:35:1	0 PM	
4C		AshworthA	1/11/2007 11:5	7:14	
4C		AshworthA	1/12/2007 1:48:	39 PM	
4C		DAWKINSO	1/12/2007 1:58:	59 PM	
AC		DAWKINSO	1/12/2007 5:26:	40 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

1/17/2007 4:05:35 PM

### ICOC Fraction Transfer/Status Report ByDate: 1/17/2006, 1/22/2007, Batch: '6345294', User: \*ALL Order By DateTimeAccepting

Q Batch Work	Ord CurStat	us Ad	cepting		Comments
6345294					
AC	CalcC	BockJ	1/3/2007 2:59:3	99 PM	
SC		wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC		BockJ	InPrep	1/3/2007 2:59:39 PM	rich-rc-5017 rEVISION 5
SC		BockJ	Prep1C	1/3/2007 3:18:36 PM	RICH-RC-5016 REVISION 6
SC		ManisD	InSep1	1/3/2007 4:06:23 PM	RICH-RC-5006 REV 6
SC		ManisD	Sep1C	1/8/2007 3:38:07 PM	RICH-RC-5006 REV 6
sc		DAWKINSO	InCnt1	1/8/2007 3:52:56 PM	RICH-RD-0007 REVISION 5
SC		BlackCL	Cnt1C	1/9/2007 7:27:35 AM	RICH-RD-0007 REVISION 5
SC		ManisD	Sep2C	1/15/2007 3:58:51 PM	RICH-RC-5071 REV 4
SC		DAWKINSO	InCnt2	1/15/2007 4:24:04 PM	RICH-RD-0003 REVISION 4
SC		BlackCL	CalcC	1/17/2007 8:19:38 AM	RICH-RD-0003 REVISION 4
AC		BockJ	1/3/2007 3:18:3	36 PM	
AC		ManisD	1/3/2007 4:06:2	23 PM	
AC		ManisD	1/8/2007 3:38:0	)7 PM	
AC		DAWKINSO	1/8/2007 3:52:5	56 PM	
AC		BlackCL	1/9/2007 7:27:3	35 AM	
AC .		ManisD	1/15/2007 3:58	:51 PM	
AC		DAWKINSO	1/15/2007 4:24	:04 PM	
AC		BlackCL	1/17/2007 8:19	:38	

AC: Accepting Entry, SC: Status Change

STL Richland

Richland Wa.

STL RICHLAND

Page 1

Grp Rec Cnt:9 ICOCFractions v4.8.26 1/16/2007 4:43:38 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/16/2006, 1/21/2007, Batch: '6345299', User: \*ALL Order By DateTimeAccepting

Batch Work Or	d CurStati	ıs Ac	cepting		Comments
6345299 AC SC SC SC SC SC SC	CalcC	BockJ wagarr BockJ BockJ AshworthA AshworthA DAWKINSO	1/8/2007 9:22:2 IsBatched InPrep Prep1C InPrep2 Prep2C InCnt1 CaicC	29 AM 12/11/2006 11:15:16 AM 1/8/2007 9:22:29 AM 1/8/2007 9:34:46 AM 1/12/2007 9:14:54 AM 1/15/2007 5:46:13 PM 1/15/2007 5:58:17 PM 1/15/2007 9:58:54 PM	ICOC_RADCALC v4.8.26 RICH-RC-5016 Revision 6 RICH-RC-5017 REVISION 5 RICH-RC-5017 REVISION 4 RICH-RC-5017 REVISION 4 RICH-RD-0007 REVISION 5 RICH-RD-0007 REVISION 5
4C 4C 4C 4C 4C		BockJ AshworthA AshworthA DAWKINSO DAWKINSO	1/8/2007 9:34:4 1/12/2007 9:14 1/15/2007 5:46 1/15/2007 5:58 1/15/2007 9:58	46 AM :54 :13 PM :17 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

STL RICHLAND

Page 1

Grp Rec Cnt: 6 ICOCFractions v4.8.26 1/16/2007 4:44:32 PM

### ICOC Fraction Transfer/Status Report ByDate: 1/16/2006, 1/21/2007, Batch: '6345301', User: \*ALL Order By DateTimeAccepting

Q Batch W	ork Ord CurStat	tus A	cepting		Comments
6345301					
AC	CalcC	BockJ	1/8/2007 2:41:4	3 PM	
SC		wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC		BockJ	InPrep	1/8/2007 2:41:43 PM	RICH-RC-5016 Revision 6
SC		BockJ	Prep1C	1/8/2007 2:59:45 PM	RICH-RC-5017 REVISION 5
SC		AshworthA	InPrep2	1/12/2007 9:15:02 AM	RICH-RC-5017 REVISION 4
S <i>C</i>		AshworthA	Prep2C	1/15/2007 5:46:23 PM	RICH-RC-5017 REVISION 4
SC		DAWKINSO	InCnt1	1/15/2007 5:58:23 PM	RICH-RD-0007 REVISION 5
SC		BlackCL	CalcC	1/16/2007 7:03:05 AM	RICH-RD-0007 REVISION 5
4 <i>C</i>		BockJ	1/8/2007 2:59:4	15 PM	•
4 <i>C</i>		AshworthA	1/12/2007 9:15	:02	
4 <i>C</i>		AshworthA	1/15/2007 5:46	23 PM	
4 <i>C</i>		DAWKINSO	1/15/2007 5:58	23 PM	
AC		BlackCL	1/16/2007 7:03	:05	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

STL RICHLAND

Page 1

Grp Rec Cnt:6 ICOCFractions v4.8.26 1/19/2007 11:46:19 AM

### ICOC Fraction Transfer/Status Report ByDate: 1/19/2006, 1/24/2007, Batch: '6345293', User: \*ALL Order By DateTimeAccepting

Q Batch Work	Ord CurStat	us Ac	cepting		Comments
6345293					
AC	CalcC	BostedD	1/8/2007 2:03:1	0 PM	
sc		wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC		BostedD	<b>i</b> nPrep	1/8/2007 2:03:10 PM	RICHRC5025 REV3
SC		BostedD	Prep1C	1/17/2007 4:44:00 PM	RICHRC5025 REV3
SC.		DAWKINSO	InCnt1	1/17/2007 4:54:09 PM	RICH-RD-0007 REVISION 5
SC		StringerR	CalcC	1/18/2007 6:42:32 AM	RICH-RD-0007 REVISION 5
4 <i>C</i>		BostedD	1/17/2007 4:44	00 PM	
4 <i>C</i>		DAWKINSO	1/17/2007 4:54	09 PM	
AC		StringerR	1/18/2007 6:42	32	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

1/12/2007 2:40:00 PM

## ICOC Fraction Transfer/Status Report ByDate: 1/12/2006, 1/17/2007, Batch: '6345303', User: \*ALL Order By DateTimeAccepting

Q Batch V	ork Ord CurSta	tus A	ccepting		Comments
6345303	**************************************	A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA			
AC	CalcC	BockJ	1/8/2007 8:39:3	34 AM	
SC		wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC		BockJ	inPrep	1/8/2007 8:39:34 AM	RICH-RC-5016 Revision 6
SC		BockJ	Prep1C	1/8/2007 8:50:54 AM	RICH-RC-5016 REVISION 6
SC		FABREM	Sep1C	1/10/2007 2:28:48 PM	RICH-RC-5065 REVISION 5
SC		DAWKINSO	InCnt1	1/10/2007 2:57:02 PM	RICH-RD-0001 REVISION 3
SC		StringerR	CalcC	1/11/2007 9:08:38 AM	RICH-RD-0001 REVISION 3
AC		BockJ	1/8/2007 8:50:5	54 AM	
AC		FABREM	1/10/2007 2:28	:48 PM	4
AC		DAWKINSO	1/10/2007 2:57	:02 PM	
AC		StringerR	1/11/2007 9:08	:38	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

1/9/2007 4:17:03 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/9/2006, 1/14/2007, Batch: '6345297', User: \*ALL Order By DateTimeAccepting

Batch Work	Ord CurStat	us Ad	ccepting		Comments
345297					-
1C	CalcC	McDowellD	12/28/2006 11:	12:51	
SC		wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
SC .		McDowellD	InSep1	12/28/2006 11:12:51 AM	RICH-RC-5007 REVISION 6
C .		McDowellD	Sep1C	1/5/2007 3:32:27 PM	RICH-RC-5007 REVISION 6
SC .		DAWKINSO	InCnt1	1/5/2007 3:39:07 PM	RICH-RD-0001 REVISION 3
SC		StringerR	CalcC	1/7/2007 10:07:13 AM	RICH-RD-0001 REVISION 3
С		McDowellD	1/5/2007 3:32:2	27 PM	
C		DAWKINSO	1/5/2007 3:39:0	7 PM	
IC		StringerR	1/7/2007 10:07	:13	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Page 1

Grp Rec Cnt:4 ICOCFractions v4.8.26 1/18/2007 11:03:19 AM

## ICOC Fraction Transfer/Status Report ByDate: 1/18/2006, 1/23/2007, Batch: '6345304', User: \*ALL Order By DateTimeAccepting

	us .	Accepting		Comments
	**************************************			
Cnt1C	BockJ	1/5/2007 12:08	:27 PM	
	wagarr	IsBatched	12/11/2006 11:15:16 AM	ICOC_RADCALC v4.8.26
	BockJ	InPrep	1/5/2007 12:08:27 PM	RICH-RC-5014 Revision 6
	BockJ	Prep1C	1/5/2007 12:15:35 PM	RICH-RC-5015 REVISION 4
	AntonsonL	Sep1C	1/12/2007 3:37:28 PM	RICH-RC-5015 REVISION 4
	NelsonT	Cnt1C	1/17/2007 5:42:48 PM	RICH-RC-5058 REV 7
	BockJ	1/5/2007 12:15:	:35 PM	
	AntonsonL	1/12/2007 3:37:	28 PM	
	NelsonT	1/17/2007 5:42:	:48 PM	
	Cnt1C	wagarr BockJ BockJ AntonsonL NelsonT BockJ AntonsonL	wagarr IsBatched BockJ InPrep BockJ Prep1C AntonsonL Sep1C NelsonT Cnt1C BockJ 1/5/2007 12:15 AntonsonL 1/12/2007 3:37	wagarr         IsBatched         12/11/2006 11:15:16 AM           BockJ         InPrep         1/5/2007 12:08:27 PM           BockJ         Prep1C         1/5/2007 12:15:35 PM           AntonsonL         Sep1C         1/12/2007 3:37:28 PM           NelsonT         Cnt1C         1/17/2007 5:42:48 PM           BockJ         1/5/2007 12:15:35 PM           AntonsonL         1/12/2007 3:37:28 PM

AU: Accepting Entry; SC: Status Change

STL Richland

Richtand Wa.

STL RICHLAND

RQC050

#### Severn Trent Laboratories, Inc. WET CHEM BATCHSHEET

Run Date: 1/22/07 Time: 12:47:37

#### STL Richland

#### PRODUCTION FIGURES - WET CHEM

	FRODUCI	LON FIGOR	11 - HE	CHEN				
	AMPLE JMBER QC	RE-RUN MATRIX	RE-RUN OTHER	MIS		TOTAL HOURS	EXPANDED DELIVERABLE	
METHOD: QC BATCH #: PREP DATE: COMP DATE: USER:		ETHOD 922	INITIAL	SP (J) M	0. P4 (52)	DATA EN' SP INITIA DATE		
Work Order	Lab Number		tured ysis	Exp. Del.	Analysi Date	s Sample	e ID:	#col
JKXVD-1-AA	J-6L060355-001	XX I 88	IZ 5I	E	12-5-0	<u>2</u> 6 B1L6F8	3	O
JKXVG-1-AA	J-6L060355-002	XX I 88	IZ 5I	E		_ B1L6F1	3	0
JKXVK-1-AA	J-6L060355-003	XX I 88	IZ 5I	E		_ B1L6C	3	344.8
JKXVM-1-AA	J-6L060355-004	XX I 88	IZ 5I	E		_ Bll6C	3	0
JKXVQ-1-AA	J-6L060355-005	XX I 88	IZ 5I	E		_ B1L6D	3	0
JKXVQ-1-AC	J-6L060355-005-X	XX I 88	IZ 5I	E		B1L6D	BDUP	0
JK710-1-AA	J-6L110000-295-B	XX I 88	IZ 5I			_ INTRA	-LAB BLANK	0
JK710-1-AC	J-6L110000-295-C	XX I 88	IZ 5I		., 1	_ INTRA	-LAB CHECK	9.7
		Control	Limits					

(0-0)

RQC050

#### Severn Trent Laboratories, Inc. WET CHEM BATCHSHEET

Run Date: 1/22/07 Time: 12:48:32

STL Richland

#### PRODUCTION FIGURES - WET CHEM

	MPLE MBER QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE	
METHOD: QC BATCH #: PREP DATE: COMP DATE: USER:	IZ COLIFORM BY 7022272 1/22/07 12/11/06 KENITZEP	METHOD 922	INITIALS:	DM 64911-22	DATA EN 7 INITI 7 DATE		
Work Order	Lab Number	Struc Anal			is Sampl	e ID:	# 001
JK317-1-AA	J-6L080160-001	XX I 88	IZ 5I	E 12.6.0	6 B1L6H	2	0
JK317-1-AC	J-6L080160-001-2	XX I 88	IZ 5I	E	B1L6H	2 DUP	0
JM6RE-1-AA	J-7A220000-272-E	3 XX I 88	IZ 5I		INTRA	-LAB BLANK	0
JM6RE-1-AC	J-7A220000-272-0	XX I 88	IZ 5I	$\sqrt{}$	INTRA	-LAB CHECK	263
and any any and any any any any any any any any any any	MALA	Control	Limits				

(0-0)